



YAMAHA

YZ80T

www.legends-yamaha-enduros.com

**OWNER'S SERVICE
MANUAL**

www.legends-yamaha-enduros.com

YZ80T

OWNER'S SERVICE MANUAL

© 1986 by Yamaha Motor Corporation, U.S.A.

1st Edition, August 1986

**All rights reserved. Any reprinting or
unauthorized use without the written
permission of Yamaha Motor Corporation
U.S.A. is expressly prohibited.**

Printed in Japan

P/N LIT-11626-05-78

INTRODUCTION

Congratulations on your purchase of a Yamaha YZ80T. This model is the culmination of Yamaha's vast experience in the production of pacesetting racing machines: It represents the highest grade of craftsmanship and reliability that have made Yamaha a leader.

This manual explains operation, inspection, and basic maintenance of your machine. If you have any questions about this manual or your machine, please contact your Yamaha dealer.

NOTE:

As improvements are made on this model, some data in this manual may become outdated. If you have any questions, please consult your Yamaha dealer.

WARNING:

PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE ATTEMPTING TO OPERATE THIS MACHINE. DO NOT ATTEMPT TO OPERATE THIS MACHINE UNTIL YOU HAVE ATTAINED SATISFACTORY KNOWLEDGE OF ITS CONTROLS AND OPERATING FEATURES.

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE OPERATIONS
YAMAHA MOTOR CO., LTD.

www.legends-yamaha-enduros.com

YZ MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants to the original retail purchaser that the following components equipped on new Yamaha YZ motorcycles purchased from an authorized Yamaha motorcycle dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations. YZ components included under this warranty are the engine, frame, swingarm, and monoshock. It is understood that the balance of the YZ components are not covered by any warranty, expressed or implied. The balance of the components equipped on the unit are sold on an "as is" basis. This warranty applies to the original purchaser only and is not transferable.

THE PERIOD OF WARRANTY for the above-listed Yamaha YZ components as originally installed on the unit shall be thirty (30) days from the date of purchase.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing, or other commercial purposes.

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will provide:

1. The replacement of any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the machine's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation, U.S.A.
2. Any repairs made necessary by faulty workmanship or material from the factory.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:

- a. Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
- b. Abnormal strain, neglect, or abuse.
- c. Accident or collision damage.
- d. Modification to original parts.
- e. Lack of proper maintenance.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the YZ as specified in the appropriate Owner's Service Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT

ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
Post Office Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

- Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.
- Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high-rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transportation and or tie down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.
- Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.
- Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that the critical adjustments to timing, carburetion, and oil injection be done by a Yamaha motorcycle dealer.
- Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's Manual, that failure may not be covered under warranty.
- Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha motorcycle dealer is expected to:
1. Completely set up every new machine before sale.
2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date.
3. Each Yamaha motorcycle dealer is held responsible for his setup, service and warranty repair work.
- Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha motorcycle dealer for the policy to remain effective.

CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. If you are still not satisfied and require additional assistance, please write:

YAMAHA MOTOR CORPORATION U.S.A.
WARRANTY/CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A. don't forget to include any important information such as names, addresses, model, engine serial number, dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, engine serial number, dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

IMPORTANT NOTICE

THIS MACHINE IS DESIGNED STRICTLY FOR COMPETITION USE, ONLY ON A CLOSED COURSE. It is illegal for this machine to be operated on any public street, road, or highway. Off-road use on public lands may also be illegal. Please check local regulations before riding.

SAFETY WARNINGS

- 1. THIS MACHINE IS TO BE OPERATED BY AN EXPERIENCED RIDER ONLY.**
Do not attempt to operate this machine at maximum power until you are totally familiar with its characteristics.
- 2. THIS MACHINE IS DESIGNED TO BE RIDDEN BY THE OPERATOR ONLY.**
Do not carry passengers on this machine.
- 3. ALWAYS WEAR PROTECTIVE APPAREL.**
When operating this machine, always wear an approved helmet with goggles or a face shield. Also wear heavy boots, gloves, and protective clothing. Always wear proper fitting clothing that will not be caught in any of the moving parts or controls of the machine.
- 4. ALWAYS MAINTAIN YOUR MACHINE IN PROPER WORKING ORDER.**
For safety and reliability, the machine must be properly maintained. Your machine should receive service from a qualified mechanic whenever indicated in this manual and/or if the mechanical condition of the machine makes it necessary.
Always perform the pre-operation checks indicated in this manual. Correcting a mechanical problem before you ride may prevent an accident.
- 5. GASOLINE IS HIGHLY FLAMMABLE.**
Always turn off the engine while refueling. Take care to not spill any gasoline on the engine or exhaust system. Never refuel in the vicinity of an open flame, or while smoking.
- 6. GASOLINE CAN CAUSE INJURY.**
If you should swallow some gasoline, inhale excess gasoline vapors, or allow any gasoline to get into your eyes, contact a doctor immediately. If any gasoline spills onto your skin or clothing, immediately wash skin areas with soap and water, and change your clothes.
- 7. ONLY OPERATE THE MACHINE IN AN AREA WITH ADEQUATE VENTILATION.**
Never start the engine or let it run for any length of time in an enclosed area. Exhaust fumes are poisonous. These fumes contain carbon monoxide, which by itself is odorless and colorless. Carbon monoxide is a dangerous gas which can cause unconsciousness or can be lethal.
- 8. PARK THE MACHINE CAREFULLY; TURN OFF THE ENGINE.**
Always turn off the engine if you are going to leave the machine. Do not park the machine on a slope or soft ground as it may fall over.
- 9. PROPERLY SECURE THE MACHINE BEFORE TRANSPORTING IT.**
When transporting the machine in another vehicle, always be sure it is properly secured and in an upright position. If the machine should fall over, gasoline may leak from the carburetor or fuel tank.

TO THE NEW OWNER

This manual will provide you with a good basic understanding of features, operation, and basic maintenance and inspection items of this machine. Please read this manual carefully and completely before operating your new machine. The suspension and carburetor on this machine can be adjusted. For details of tuning, refer to the "RACE PREPARATION AND TUNING MANUAL" (90894-13400).

If you have any questions regarding the operation or maintenance of your machine, please consult your Yamaha dealer.

NOTE:

This manual should be considered a permanent part of this machine and should remain with it even if the machine is subsequently sold.

NOTICE

Some data in this manual may become outdated due to improvements made to this model in the future. If there is any question you have regarding this manual or your machine, please consult your Yamaha dealer.

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

NOTE: A NOTE provides key information to make procedures easier or clearer.

CAUTION:

A CAUTION indicates special procedures that must be followed to avoid damage to the machine.

WARNING:

A WARNING indicates special procedures that must be followed to avoid injury to a machine operator or person inspecting or repairing the machine.

MANUAL FORMAT





















All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations. In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

•Bearings

Pitting/Damage → Replace.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.

① GEN INFO 	② MA ADJ 	
③ ENG 	④ COOL 	
⑤ CHAS 	⑥ ELEC 	
⑦ APPX 		
⑧ 	⑨ 	
⑩ 	⑪ 	
⑫ 	⑬ 	
⑭ 	⑮ 	⑯ 
⑰ 	⑱ 	⑲ 
⑳ 		

ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑦ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Periodic inspection and adjustment
- ③ Engine
- ④ Cooling system
- ⑤ Chassis
- ⑥ Electrical
- ⑦ Appendices








Illustrated symbols ⑧ to ⑬ are used to identify the specifications appearing.

- ⑧ Filling fluid
- ⑨ Lubricant
- ⑩ Tightening
- ⑪ Wear limit, clearance
- ⑫ Engine speed
- ⑬ Ω , V, A

Illustrated symbols ⑭ to ⑳ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑭ Apply engine mixing oil
- ⑮ Apply gear oil
- ⑯ Apply molybdenum disulfide oil
- ⑰ Apply wheel bearing grease
- ⑱ Apply lightweight lithium-soap base grease
- ⑲ Apply molybdenum disulfide grease
- ⑳ Apply locking agent (LOCTITE®)

INDEX

GENERAL INFORMATION	 GEN INFO 1
REGULAR MAINTENANCE AND ADJUSTMENTS	 MA ADJ 2
ENGINE MAINTENANCE AND REPAIR	 ENG 3
COOLING SYSTEM MAINTENANCE AND REPAIR <small>www.legendo-yamaha-enduros.com</small>	 COOL 4
CHASSIS MAINTENANCE AND REPAIR	 CHAS 5
ELECTRICAL TROUBLESHOOTING	 ELEC 6
APPENDICES	 APPX 7

CHAPTER 1

GENERAL INFORMATION

DESCRIPTION	1-1
MACHINE IDENTIFICATION	1-2
VEHICLE IDENTIFICATION NUMBER	1-2
ENGINE SERIAL NUMBER	1-2
IMPORTANT INFORMATION	1-3
PREPARATION FOR REMOVAL AND DISASSEMBLY	1-3
ALL REPLACEMENT PARTS	1-3
GASKETS, OIL SEALS AND O-RING	1-4
LOCK WASHERS/PLATES AND COTTER PINS	1-4
BEARINGS AND OIL SEALS	1-4
CIRCLIPS	1-4
SPECIAL TOOLS	1-5
FOR TUNE UP	1-5
FOR ENGINE SERVICE	1-5
FOR CHASSIS SERVICE	1-6
FOR ELECTRICAL COMPONENTS	1-7
CONTROL FUNCTIONS	1-7
FUEL, OIL AND COOLANT	1-9
FUEL	1-9
TRANSMISSION OIL	1-10
COOLANT	1-10
PRE-OPERATION CHECK LIST	1-12
STARTING AND BREAK-IN	1-13
STARTING A COLD ENGINE	1-13
STARTING A WARM ENGINE	1-13
BREAK-IN PROCEDURES	1-14
CLEANING AND STORAGE	1-15
CLEANING	1-15
STORAGE	1-16

GENERAL INFORMATION

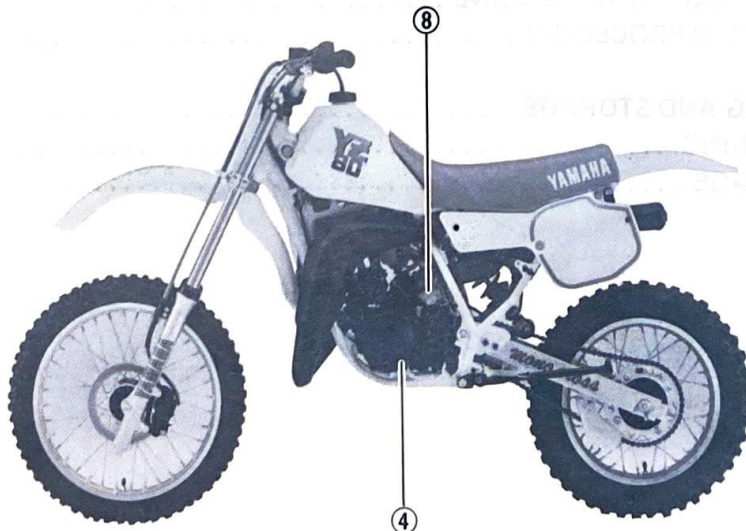
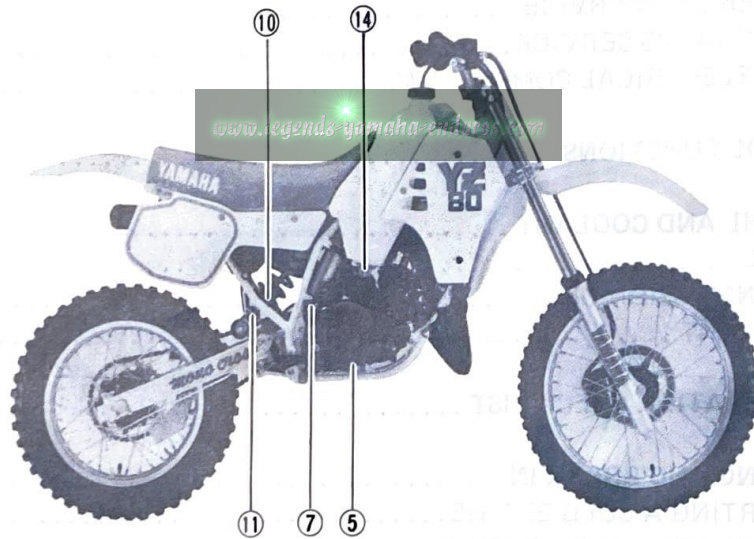
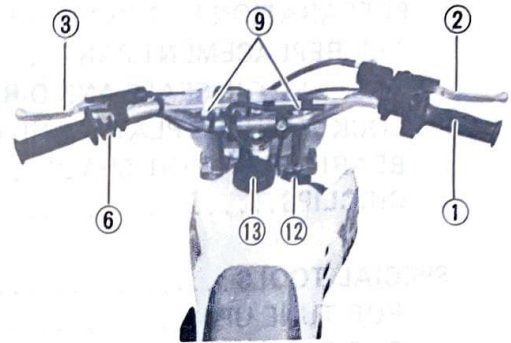
DESCRIPTION

- ① Throttle grip
- ② Front brake lever
- ③ Clutch lever
- ④ Change pedal
- ⑤ Rear brake pedal
- ⑥ "ENGINE STOP" button
- ⑦ Kick starter
- ⑧ Starter knob
- ⑨ Front fork air valve
- ⑩ Spring pre-load adjuster
- ⑪ Rebound damping adjuster
- ⑫ Radiator cap
- ⑬ Fuel tank cap
- ⑭ Fuel cock

NOTE:

- The machine you have purchased may differ slightly from those shown in the photographs.
- Designs and specifications are subject to change without notice.

1



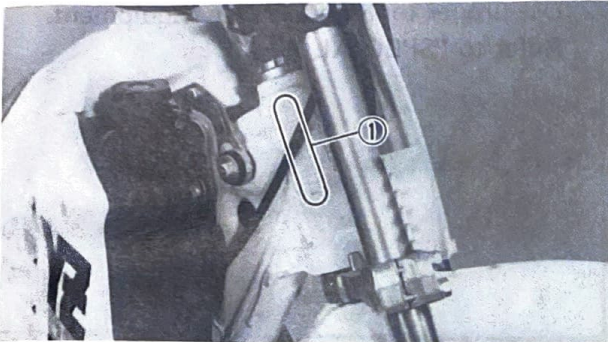
MACHINE IDENTIFICATION

There are two significant reasons for knowing the serial number of your machine:

1. When ordering parts, you can give the number to your Yamaha dealer for positive identification of the model you own.
2. If your machine is stolen, the authorities will need the number to search for and identify your machine.

VEHICLE IDENTIFICATION NUMBER

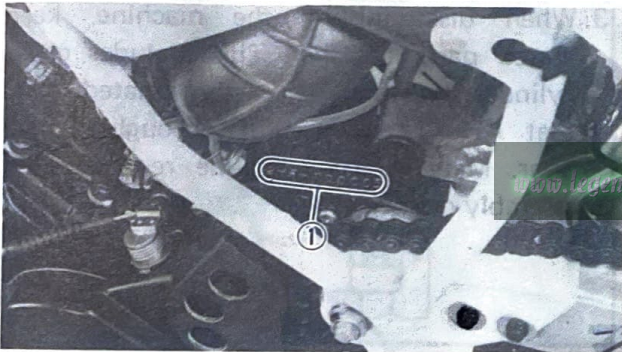
The vehicle identification number ① is stamped on the right of the steering head pipe.



Starting Serial Number:
JYA2HF00 * HA000101

ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the elevated part of the right rear section of the engine.

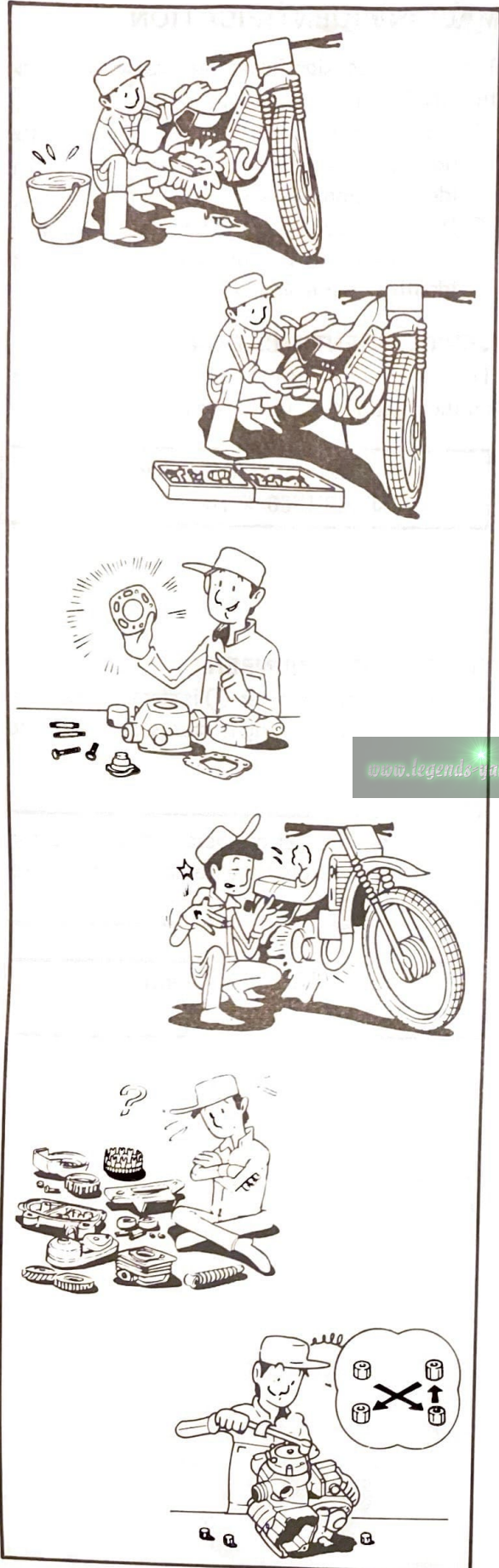
**NOTE:**

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

Starting Serial Number:
2HF-000101



1



IMPORTANT INFORMATION

PREPARATION FOR REMOVAL AND DIS-ASSEMBLY

1. Remove all dirt, mud, dust, and foreign material before removal and disassembly.

2. Use proper tools and cleaning equipment. Refer to "SPECIAL TOOL".

3. When disassembling the machine, keep mated parts together. This includes gears, cylinders, pistons, and other mated parts that have been "mated" through normal wear. Mated parts must be reused as an assembly or replaced.

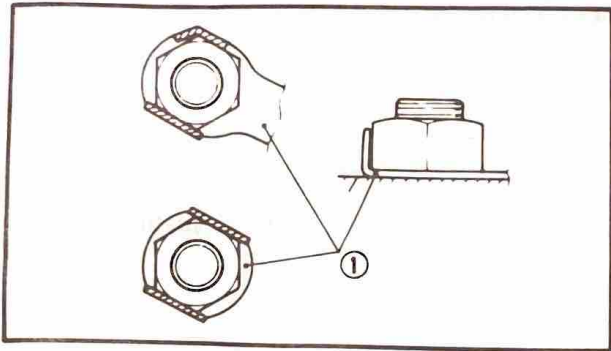
4. During the machines disassembly, clean all parts and place them in trays in the order of disassembly. This will speed up assembly time and help assure that all parts are correctly reinstalled.
5. Keep away from fire.

ALL REPLACEMENT PARTS

1. We recommend to use Yamaha genuine parts for all replacements. Use oil and/or grease recommended by Yamaha for assembly and adjustment.

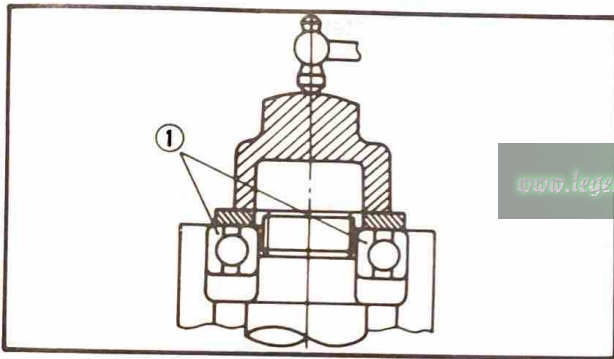
GASKETS, OIL SEALS AND O-RINGS

1. All gaskets, seals and O-rings should be replaced when an engine is overhauled. All gasket surfaces, oil seal lips and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



LOCK WASHERS/PLATES AND COTTER PINS

1. All lock washers/plates ① and cotter pins must be replaced when they are removed. Lock tab(s) should be bent along the bolt or nut flat(s) after the bolt or nut has been properly tightened.

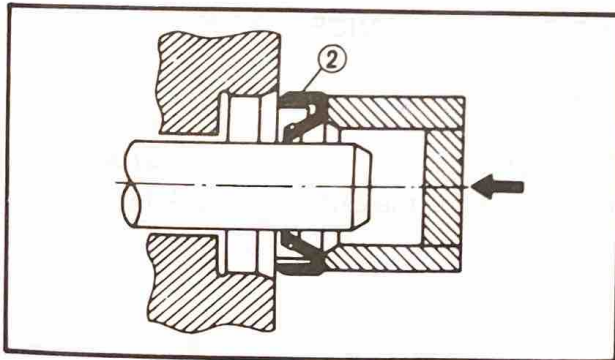


BEARINGS AND OIL SEALS

1. Install the bearing(s) ① and oil seal(s) ② with their manufacturer's marks or numbers facing outward. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of light-weight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.

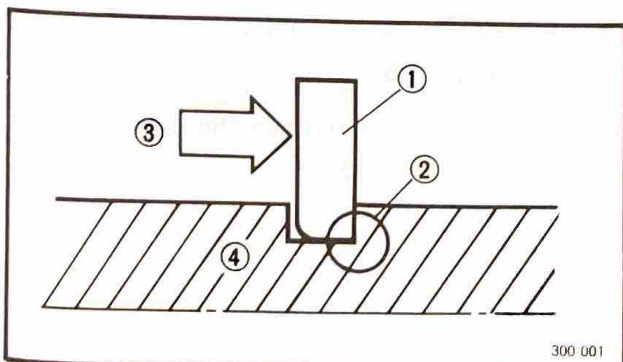
CAUTION:

Do not use compressed air to spin the bearings dry. This causes damage to the bearing surfaces.



CIRCLIPS

1. All circlips should be inspected carefully before reassembly. Always replace piston pin clips after one use. Replace distorted circlips. When installing a circlip ①, make sure that the sharp-edged corner ② is positioned opposite to the thrust ③ it receives. See the sectional view.



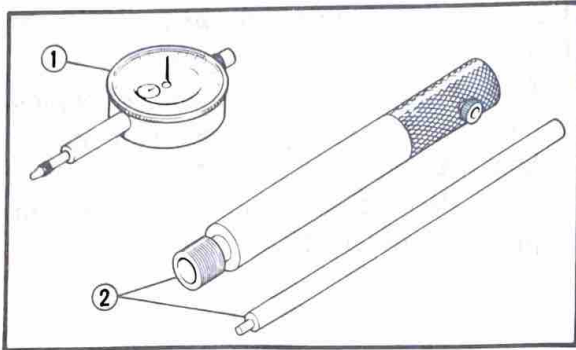
300 001

④ Shaft

SPECIAL TOOLS

The proper special tools are necessary for complete and accurate tune-up and assembly. Using the correct special tool will help prevent damage caused by the use of improper tools or improvised techniques.

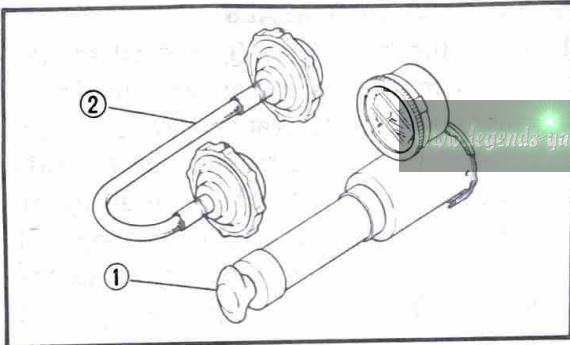
1



FOR TUNE UP

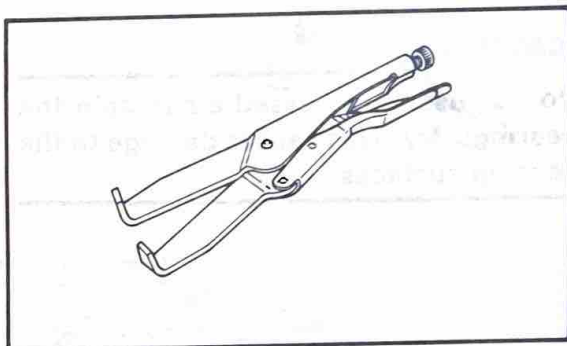
- 1. Dial Gauge – ①
P/N. YU-03097
- Dial Gauge Stand – ②
P/N. YU-01126

These tools are needed for adjusting ignition timing.



- 2. Radiator Cap Tester – ①
P/N. YU-22460-01
- Adapter – ②
P/N. YU-33984

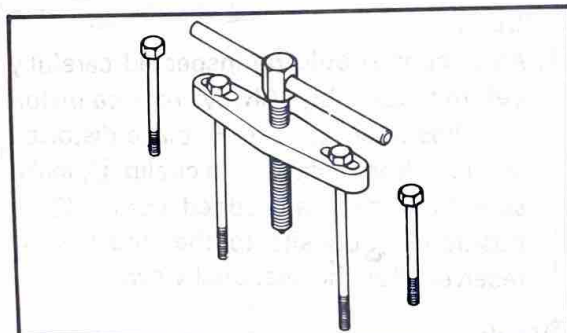
These tools are used when inspecting the cooling system.



FOR ENGINE SERVICE

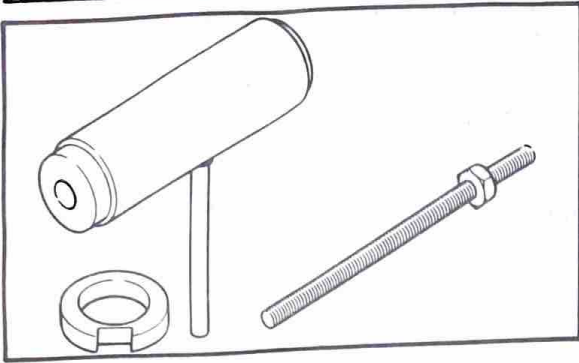
- 1. Universal Clutch Holder
P/N. YM-91042

This tool is used to hold the clutch when removing or installing the clutch boss locknut.



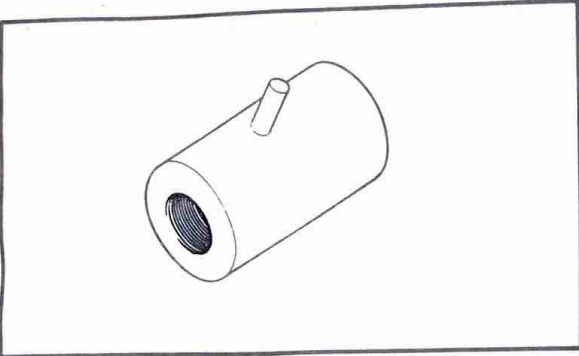
- 2. Crankcase Separating Tool
P/N. YU-01135

This tool is used to remove the crankshaft or separate the crankcase.



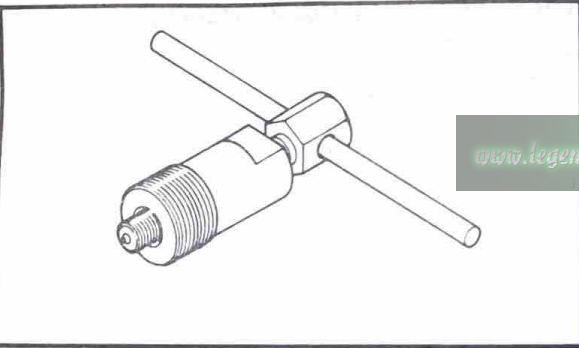
3. Crankshaft Installing Set
P/N. YU-90050

These tools are used to install the crankshaft.



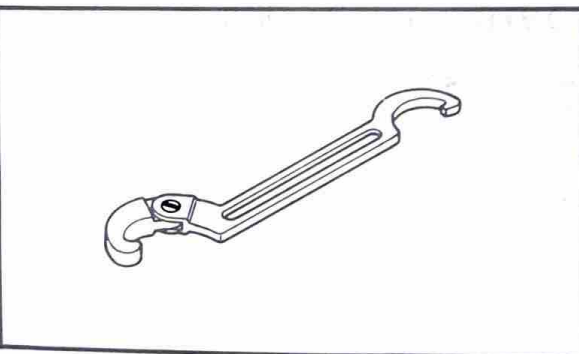
4. Adapter
P/N. YM-90063

This tool is necessary for installing the crankshaft.



5. Magneto Puller
P/N. YM-01189

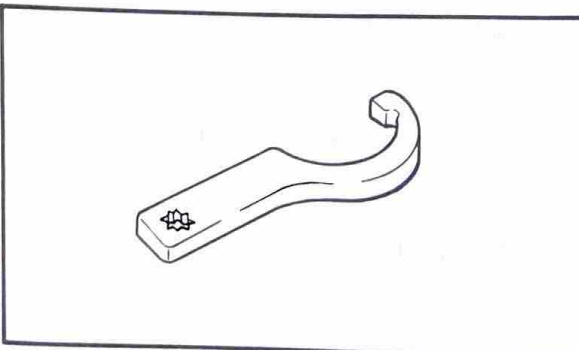
This tool is used to remove the magneto.



FOR CHASSIS SERVICE

1. Ring Nut Wrench
P/N. YU-01268

This tool is used to loosen or tighten the steering ring nut.

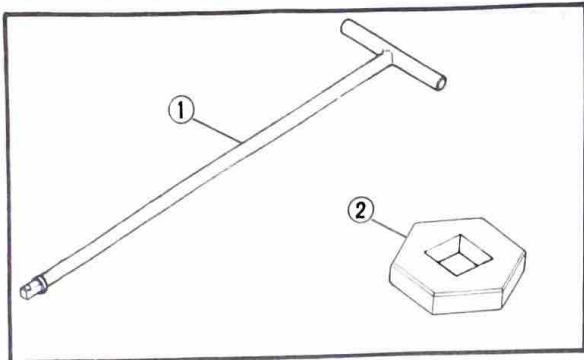


2. Ring Nut Wrench
P/N. YU-33975

This tool is used when tightening the steering ring nut to specification.

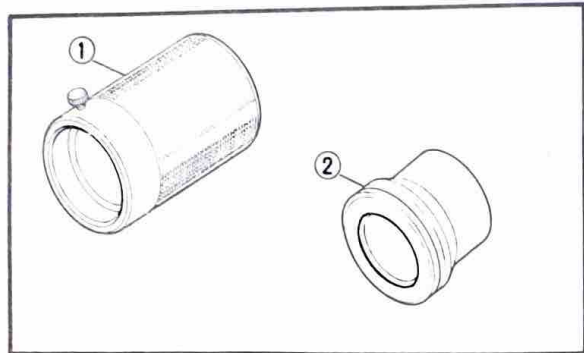


1



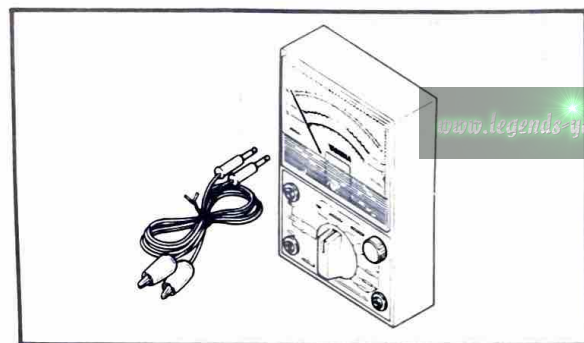
- 3. T-Handle – ①
P/N. YM-01326
- Damper Rod Holder – ②
P/N. YM-33256

These tools are used when loosening or tightening the damper rod securing bolt.



- 4. Front Fork Seal Driver (Weight) – ①
P/N. YM-33963
- Adapter – ②
P/N. YM-01368

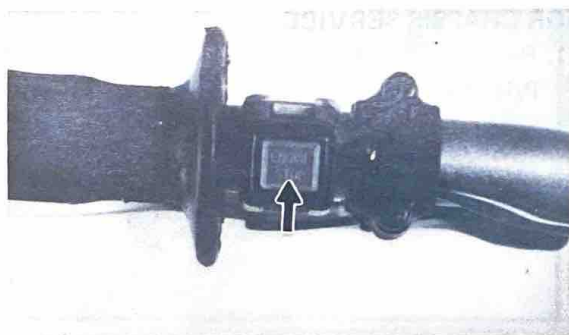
These tools are used to install the fork oil seal and slide metal.



FOR ELECTRICAL COMPONENTS

- 1. Pocket Tester
P/N. YU-03112

This instrument is invaluable for checking the electrical system.

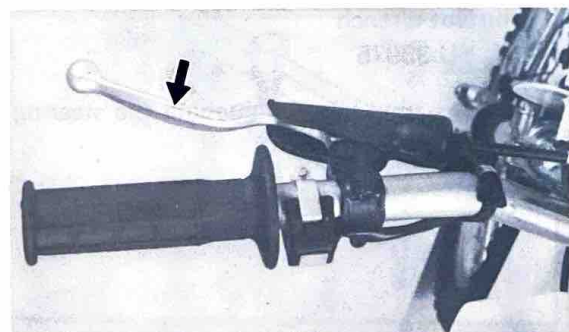


CONTROL FUNCTIONS

"ENGINE STOP" Button

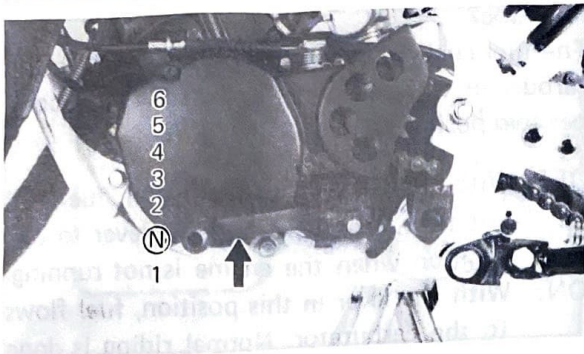
The "ENGINE STOP" button is located on the left handlebar.

Continue pushing the "ENGINE STOP" button till the engine comes to a stop.



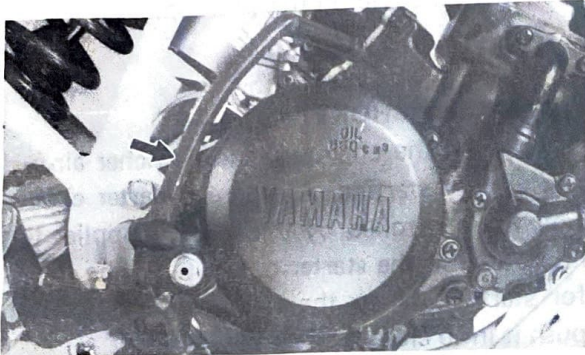
Clutch Lever

The clutch lever is located on the left handlebar; it disengages or engages the clutch. Pull the clutch lever to the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever should be pulled rapidly and released slowly for smooth starts.



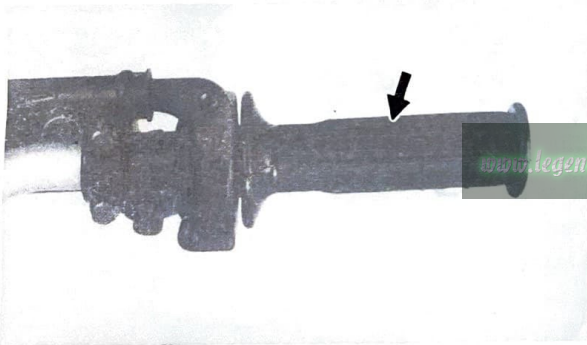
Change Pedal

The gear ratios of the constant-mesh 6-speed transmission are ideally spaced. The gears can be shifted by using the change pedal on the left side of the engine.



Kick Starter

Rotate the kick starter away from the engine. Push the starter down lightly with your foot until the gears engage, then kick smoothly and forcefully to start the engine. This model has a primary kick starter so the engine can be started in any gear if the clutch is disengaged. In normal practices, however, shift to neutral before starting.



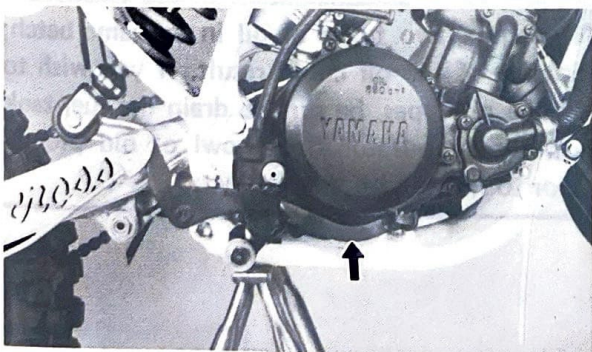
Throttle Grip

The throttle grip is located on the right handlebar; it accelerates or decelerates the engine. For acceleration, turn the grip toward you; for deceleration, turn it away from you.



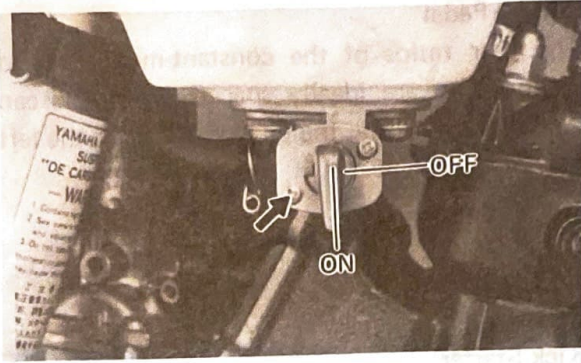
Front Brake Lever

The front brake lever is located on the right handlebar. Pull it toward the handlebar to activate the front brake.



Rear Brake Pedal

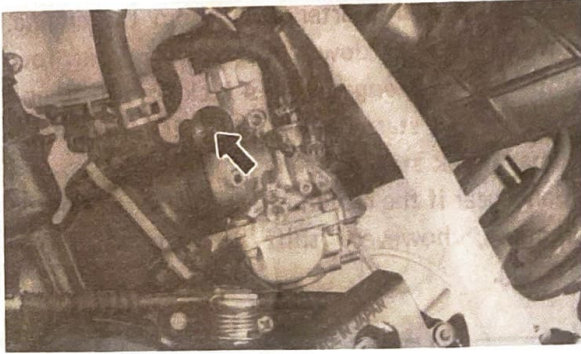
The rear brake pedal is on the right side of the machine. Press down on the brake pedal to activate the rear brake.



Fuel Cock

The fuel cock supplies fuel from the tank to the carburetor while filtering the fuel. The fuel cock has two positions:

- OFF:** With the lever in this position, fuel will not flow. Always return the lever to this position when the engine is not running.
- ON:** With the lever in this position, fuel flows to the carburetor. Normal riding is done with the lever in this position.



Starter Knob (CHOKE)

When cold, the engine requires a richer air-fuel mixture for starting. A separate starter circuit, which is controlled by the starter, supplies this mixture. Pull the starter out to open the circuit for starting. When the engine has warmed up push it in to close the circuit.

www.legends-yamaha-enduros.com

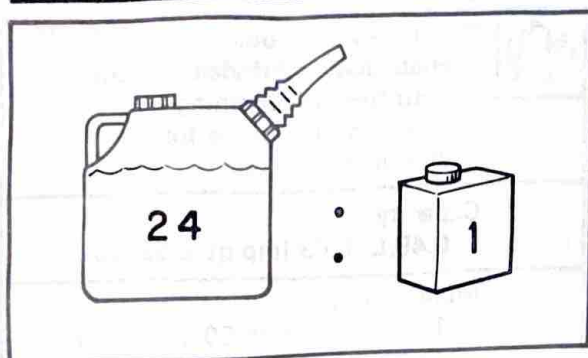
FUEL, OIL AND COOLANT

FUEL

Use premium fuel with an octane rating of at least 90. Mix oil with the gas at the ratio specified below. Always use fresh, name-brand gasoline, and mix the oil and gas the day of the race. Do not use premix that is more than a few hours old.

CAUTION:

Never mix two types of oil in the same batch; clotting of the oil could result. If you wish to change oil types, be sure to drain the fuel tank and the carburetor float bowl of old premix prior to filling with the new type.



Fuel tank capacity:
5.0 L (1.1 Imp gal, 1.3 US gal)



Mixing oil

Recommended oil:
Yamalube "R"
(Yamalube Racing 2-cycle oil)
Mixing ratio: 24 : 1

If for any reason you should use another type, select from the following list.

- Mixing ratio: 20 : 1**
- * Castrol R30
 - * Castrol A545
 - (In Germany brand name is Castrol T.T.S. but same quality as A545)
 - * Castrol A747

1

TRANSMISSION OIL

The transmission oil should be replaced at the specified intervals.

Refer to "CHAPTER 2. – MAINTENANCE INTERVALS" and "TRANSMISSION OIL REPLACEMENT" section for more detail.

www.legends-yamaha.com



Recommended oil:
Yamalube "4" or SAE 10W30 type SE motor oil

Oil capacity:
Total amount:
0.65 L (0.57 Imp qt, 0.69 US qt)
Periodic oil change:
0.70 L (0.62 Imp qt, 0.74 US qt)

COOLANT

The coolant should be replaced at the specified intervals.

Refer to "CHAPTER 2. – MAINTENANCE INTERVALS" and "COOLANT REPLACEMENT" section for more detail.



Recommended Coolant:
High Quality Ethylene Glycol
Anti-freeze Containing
Corrosion Inhibitors for
Aluminum Engine

Capacity:
0.49 L (0.43 Imp qt, 0.52 US qt)

Mixed Ratio:
1 : 1 (50% water, 50% coolant)

CAUTION:

Do not mix more than one type of ethylene glycol antifreeze containing corrosion for aluminum engine inhibitors.

Hard water or salt water is harmful to the engine parts. You may use distilled water, if you can't get soft water.

www.legends-yamaha-enduros.com

PRE-OPERATION CHECK LIST

Before riding for break-in operation, practice or a race, make sure the machine is in good operating condition.

Before using this machine, check the following points.

Item	Routine	Page
Coolant	Check that coolant is filled up to the radiator filler cap. Check the cooling system for leakage.	2-6, 2-8
Fuel	Check that a fresh mixture of oil and gasoline is filled in the fuel tank. Check the fuel line for leakage.	—
Transmission Oil	Check that the oil level is correct. Check the crankcase for leakage.	2-8
Gear Shifter and Clutch	Check that gears can be shifted correctly in order and that the clutch operates smoothly.	2-16
Throttle Grip/Housing	Check that the throttle grip operation and free play are correctly adjusted. Lubricate the throttle grip and the housing, if necessary.	2-12
Brakes	Check the play of both front and rear brakes and their braking effect.	2-14, 2-15
Chain	Check chain slack and alignment. Check that the chain is lubricated properly.	2-17
Wheels	Check for excessive wear, tire pressure, loose spokes and ensure there is no free play.	2-20, 2-21
Steering	Check that the handlebars can be turned smoothly and have no excessive play.	2-21
Front Forks and Rear Shock Absorbers	Check that they operate smoothly and there is no oil leakage. www.legends-yamaha-enduros.com	2-22, 2-25
Cables (Wires)	Check that the clutch and throttle cables move smoothly. Check that they are not caught when the handlebars are turned or when the front forks travel up and down.	—
Muffler	Check that the muffler is tightly mounted and has no cracks.	2-12
Sprocket	Check that the rear wheel sprocket tightening bolt is not loose.	2-18
Bolts and Nuts	Check the chassis and engine for loose bolts and nuts.	—
Lead Connectors	Check that the CDI magneto, CDI unit, and ignition coil are connected tightly.	—
Settings	Taking into account the result of pre race test-runs, — is the machine set suitably for the weather conditions and race course? Is inspection and maintenance completed?	—

1

STARTING AND BREAK-IN**CAUTION:**

Before starting the machine, perform the checks in the preoperation check list.

WARNING:

Never start or run the engine in a closed area. The exhaust fumes are poisonous; they can cause loss of consciousness and death in a very short time. Always operate the machine in a well-ventilated area.

STARTING A COLD ENGINE

1. Shift the transmission into neutral.
2. Turn the fuel cock to "ON" position and pull the starter knob up.
3. With the throttle completely close, start the engine by kicking the kick starter forcefully with a firm stroke.
4. Run the engine at idle or slightly higher until it warms up; this usually takes about one or two minutes.
5. The engine is warmed up when it responds normally to the throttle with the starter knob pushed completely depressed.

CAUTION:

Do not warm up the engine for extended periods.

STARTING A WARM ENGINE

Do not use the starter knob. Open the throttle slightly and start the engine by kicking the kick starter forcefully with a firm stroke.

CAUTION:

Observe the following break-in procedures during initial operation to ensure optimum performance and avoid engine damage.

BREAK-IN PROCEDURES

1. Before starting the engine, fill the fuel tank with a break-in oil-fuel mixture of 12 : 1 to 14 : 1.
2. Perform the preoperation checks on the machine.
3. Start and warm up the engine. Check the idle speed, and check the operation of the controls and the engine stop switch.
4. Operate the machine in the lower gears at moderate throttle openings for five to eight minutes. Stop and check the spark plug condition; it will show a rich condition during break-in.
5. Allow the engine to cool. Restart the engine and operate the machine as in the step above for five minutes. Then, very briefly shift to the higher gears and check full-throttle response. Stop and check the spark plug.
6. After again allowing the engine to cool, restart and run the machine for five more minutes.
Full throttle and the higher gears may be used, but sustained full-throttle operation should be avoided. Check the spark plug condition.
7. Allow the engine to cool, remove the top end, and inspect the piston and cylinder; instructions for this are on page 3-10. Remove any high spots on the piston with 600-grit, wet sandpaper. Clean all components and carefully reassemble the top end.
8. Drain the break-in oil-fuel mixture from the fuel tank and refill with the specified mix. Check the entire machine for loose screws, bolts, and nuts.
9. Restart the engine and check the operation of the machine throughout its entire operating range. Stop and check the spark plug condition. Restart the machine and operate it for about 10 to 15 more minutes. The machine will now be ready to race.

1**CAUTION:**

1. After the break-in period is completed, check the entire machine for loose fittings and fasteners. Tighten all such fasteners as required.

2. When any of the following parts have been replaced, they must be broken in.

CYLINDER AND CRANKSHAFT:

About one hour of break-in operation is necessary.

PISTON, RINGS AND GEARS:

These parts require about 30 minutes of break-in operation at half-throttle or less. Observe the condition of the engine carefully during operation.

CLEANING AND STORAGE
CLEANING

Frequent cleaning of your machine will enhance its appearance, maintain good overall performance, and extend the life of many components.

1. Before washing the machine, block off the end of the exhaust pipe to prevent water from entering, and remove the drain rubber from the air cleaner case. A plastic bag secured with a rubber band may be used for this purpose.
2. If the engine is excessively greasy, apply some degreaser to it with a paint brush. Do not apply degreaser to the chain, sprockets, or wheel axles.
3. Rinse the dirt and degreaser off with a garden hose; use only enough pressure to do the job.

CAUTION:

Excessive hose pressure can force water into wheel bearings, front fork seals, brake drums, and transmission seals. Avoid using high-pressure hoses such as those found in coin-operated car washes.

4. After the majority of the dirt has been hosed off, wash all surfaces with warm water and a mild detergent. Use an old toothbrush to clean hard-to-reach places.
5. Rinse the machine off immediately with clean water, and dry all surfaces with a soft towel or cloth.
6. Immediately after washing, remove excess water from the chain with a paper towel and lubricate the chain to prevent rust.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive wax may be applied to all painted or chromed surfaces. Avoid combination cleaner-waxes, as they may contain abrasives.
9. After completing the above, start the engine and allow it to idle for several minutes.

STORAGE

If your machine is to be stored for 60 days or more, some preventive measures must be taken to avoid deterioration. After cleaning the machine thoroughly, prepare it for storage as follows:

1. Drain the fuel tank, fuel lines, and the carburetor float bowl.
2. Remove the spark plug, pour a table-spoon of SAE 10W30 motor oil in the spark plug hole, and reinstall the plug. With the engine stop switch pushed in, kick the engine over several times to coat the cylinder walls with oil.
3. Remove the drive chain, clean it thoroughly with solvent, and lubricate it. Reinstall the chain or store it in a plastic bag tied to the frame.
4. Lubricate all control cables.
5. Block the frame up to raise the wheels off the ground.
6. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
7. If the machine is to be stored in a humid or salt-air environment, coat all exposed metal surfaces with a film of light oil. Do not apply oil to rubber parts or the seat cover.

NOTE:

Make any necessary repairs before the machine is stored.

CHAPTER 2. REGULAR MAINTENANCE AND ADJUSTMENT

MAINTENANCE INTERVALS	2-1
LUBRICATION	2-3
ENGINE	2-4
SPARK PLUG INSPECTION	2-4
IDLE SPEED ADJUSTMENT	2-5
COOLANT LEVEL INSPECTION	2-6
COOLANT REPLACEMENT	2-7
RADIATOR HOSE INSPECTION	2-8
TRANSMISSION OIL LEVEL INSPECTION	2-8
TRANSMISSION OIL REPLACEMENT	2-9
AIR FILTER CLEANING	2-10
EXHAUST SYSTEM INSPECTION	2-12
CHASSIS	2-12
THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK	2-12
BRAKE PAD INSPECTION	2-13
BRAKE PAD REPLACEMENT	2-13
FRONT BRAKE ADJUSTMENT	2-14
BRAKE FLUID LEVEL INSPECTION	2-15
REAR BRAKE ADJUSTMENT	2-15
CLUTCH ADJUSTMENT	2-16
DRIVE CHAIN SLACK ADJUSTMENT	2-17
DRIVE CHAIN AND SPROCKETS INSPECTION	2-18
TIRE PRESSURE CHECK	2-20
TIRE AND WHEEL INSPECTION	2-20
SPOKES INSPECTION AND TIGHTENING	2-21
STEERING HEAD INSPECTION AND ADJUSTMENT	2-21
FRONT FORK INSPECTION AND ADJUSTMENT	2-22
FRONT FORK OIL REPLACEMENT	2-24
REAR SHOCK ABSORBER INSPECTION AND ADJUSTMENT	2-25
ELECTRICAL	2-27
IGNITION TIMING ADJUSTMENT	2-27



MAINTENANCE INTERVALS

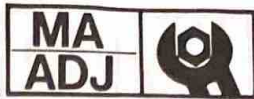
REGULAR MAINTENANCE AND ADJUSTMENT

MAINTENANCE INTERVALS

The following schedule is intended as a general guide to maintenance and lubrication. Bear in mind that such factors as weather, terrain, geographical location, and individual usage will alter the required maintenance and lubrication intervals. If you are a doubt as to what intervals to follow in maintaining and lubricating your machine, consult your Yamaha dealer.

Item	After break-in	Every race	Every third	Every fifth	As re-quired	Remarks
PISTON Inspect and clean Replace	•	•		•	•	Inspect crack Remove carbon
PISTON RING Inspect Replace	•	•	•		•	Check ring end gap
PISTON PIN, SMALL END BEARING Inspect Replace				•	•	
CYLINDER HEAD Inspect and clean Retighten	•	•				Remove carbon Check gasket
CYLINDER Inspect and clean Replace	•	•			•	Seizure Wear
CLUTCH Inspect and adjust Replace	•	•			•	Inspect friction plate, clutch plate and spring
TRANSMISSION Replace oil Inspect transmission	•			•	•	Yamalube "4" or SAE 10W30 SE motor oil
SHIFT CAM, FORK Inspect					•	Inspect wear
ROTOR NUT Retighten				•		
MUFFLER Inspect Clean	•	•		•		
CRANK Inspect and clean				•	•	
CARBURETOR Inspect and clean	•	•				
SPARK PLUG Inspect and clean Replace	•	•			•	STD plug: N-84 (CHAMPION) Gap: 0.5 ~ 0.6 mm (0.020 ~ 0.024 in)
DRIVE CHAIN Lubricate, slack, alignment Replace	•	•			•	Use chain lube Chain slack: 15 ~ 20 mm (0.6 ~ 0.8 in)

MAINTENANCE INTERVALS



Item	After break-in	Every race	Every third	Every fifth	As required	Remarks
COOLING SYSTEM Check coolant level and leakage Check radiator cap operation Replace coolant Inspect hoses	•	•			• •	Every two years
OUTSIDE NUTS AND BOLTS Retighten	•	•				
AIR FILTER Clean and oil Replace	•	•			•	Use Foam air-filter oil or SAE 10W30 motor oil
FRAME Clean and inspect	•	•				
FUEL TANK, COCK Clean and inspect	•		•			
BRAKES Adjust free play Lubricate pivot point Check fluid level and leakage Retighten brake disc bolts, caliper bolts and union bolts Replace linings/pads	• • • •	• • • •			•	Brake pad wear limit: 0.8 mm (0.03 in) Lining wear limit: 2 mm (0.08 in)
FRONT FORKS Inspect and adjust Replace oil Replace oil seal	• •	•		•	•	Fork oil 10wt
REAR SHOCK Inspect and adjust Lube and retighten	• •	• •				Lithium base grease
CHAIN GUARD AND ROLLES Inspect and replace					•	
SWINGARM Inspect and retighten	•	•				
RELAY ARM, CONNECTING ROD Inspect and lube	•	•				Lithium base grease
STEERING HEAD Inspect free play and retighten Clean and lube Replace bearing	•	•		•	•	Medium weight wheel bearing grease
TIRE, WHEELS Inspect air pressure, wheel run-out, tire wear and spoke looseness Retighten sprocket bolt Inspect bearings Replace bearings Lubricate	• •	• •		• •	•	Medium weight wheel bearing grease
THROTTLE, CONTROL CABLE Check routing and connection Lubricate	• •	• •				Yamaha cable lube SAE 10W30 motor oil

2

LUBRICATION

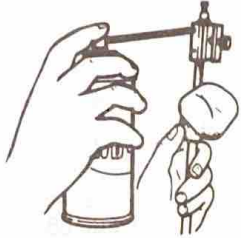
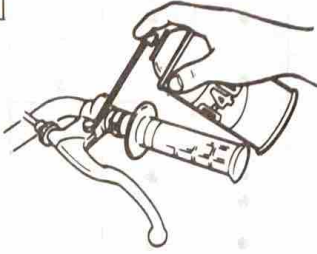
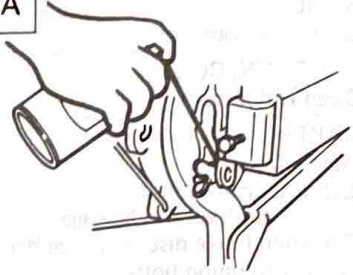
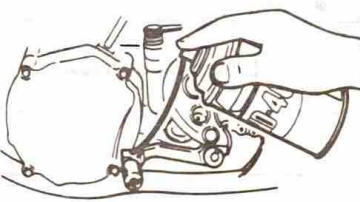
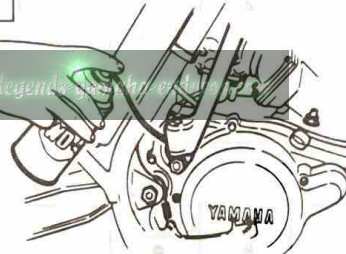
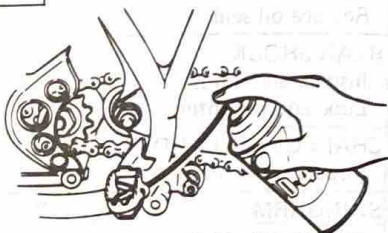
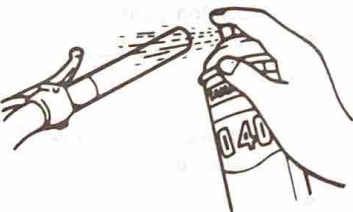
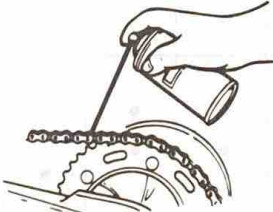

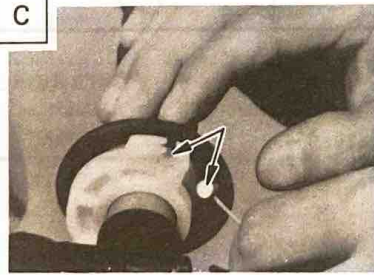
To ensure smooth operation of all components, lubricate your machine during setup, after break-in, and after every race.

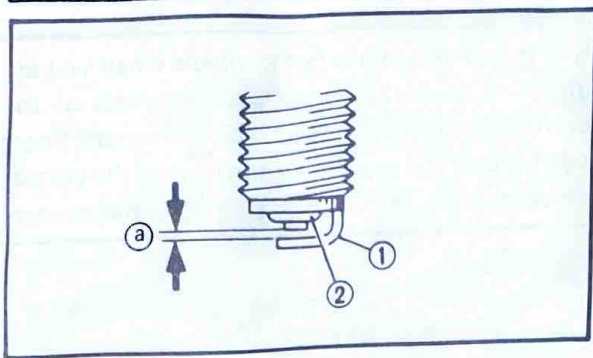
- A. Use Yamaha cable lube, or WD-40 on these areas.
- B. Use racing chain lube.

C. Lubricate the following areas with high-quality, lightweight lithium-soap base grease.

NOTE: _____
Wipe off any excess grease or oil.

2

<p>A</p>  <p>D All control cables</p>	<p>A</p>  <p>E Brake and clutch lever pivots</p>	<p>A</p>  <p>F Brake arm pivot</p>
<p>A</p>  <p>G Shift lever pivot</p>	<p>A</p>  <p>H Kick starter lever pivot</p>	<p>A</p>  <p>I Footrest pivots</p>
<p>A</p>  <p>J Throttle-to-handlebar contact</p>	<p>B</p>  <p>K Drive chain</p>	<p>C</p>  <p>L Clutch cable ends</p>
<p>C</p>  <p>M Throttle guide and cable end</p>		



ENGINE

SPARK PLUG INSPECTION

1. Inspect:

- Electrode ①
Wear/Damage → Replace.
- Insulator color ②
Normal condition is a medium to light tan color.
Distinctly different color → Check the engine condition.

① Spark plug gap

2. Clean:

- Spark plug
Clean the spark plug with a spark plug cleaner or wire brush.

3. Measure:

- Spark plug gap ①
Out of specification → Regap.
Use a wire gauge.

 **Spark Plug Gap:**
0.5 ~ 0.6 mm (0.020 ~ 0.024 in)


Standard Spark Plug:
N-84 (CHAMPION)

4. Tighten:

- Spark plug

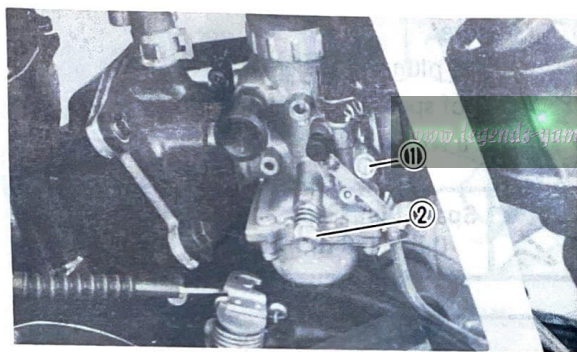
NOTE:

Before installing a spark plug, clean the gasket surface and plug surface.

 **Spark Plug:**
25 Nm (2.5 m·kg, 18 ft·lb)



2

**NOTE:**

If a torque wrench is not available when you are installing a spark plug, a good estimate of the correct torque is 1/4 to 1/2 turns part finger tight. Have the spark plug torqued to the correct value as soon as possible with a torque wrench.

IDLE SPEED ADJUSTMENT

1. Warm up engine for a few minutes.
2. Adjust:
 - Idle speed

Idle speed adjusting steps:

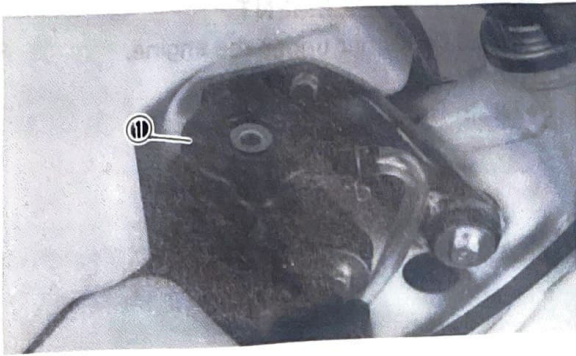
- Screw in the pilot air screw ① until it is lightly seated.
- Back out by the specified number of turns.

Pilot Air Screw:**1 and 3/4 turns out**

- Turn the throttle stop screw ② until the idle is at the desired rpm.
- Turn the pilot air screw ① in or out in 1/8-turn increments to achieve the highest rpm with just the pilot screw.
- Once again, turn the throttle stop screw ② to attain the desired idle rpm.

NOTE:

The throttle response off idle should be crisp and clean, without any hesitation. If the engine is completely warmed up and hesitates off idle, turn the pilot air screw in or out in 1/8-turn increments until the problem is eliminated.



COOLANT LEVEL INSPECTION

WARNING:

Do not remove the radiator cap ①, drain bolt and hoses when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury.

When the engine has cooled, place a thick towel over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

2

1. Place the machine on a level place, and hold it in an upright position.

2. Remove:

- Radiator cap

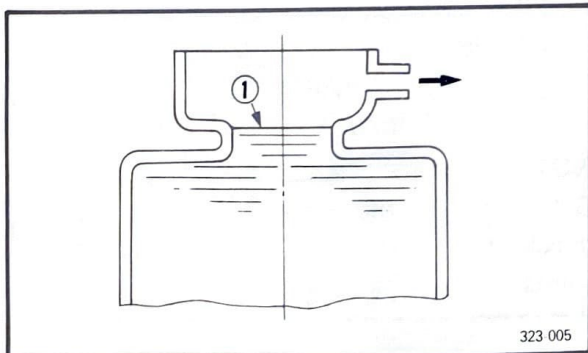
www.legends-yamaha-enduros.com

3. Inspect:

- Coolant level ①

Coolant level low → Fill.

Fill the coolant until it reaches the top of the radiator.

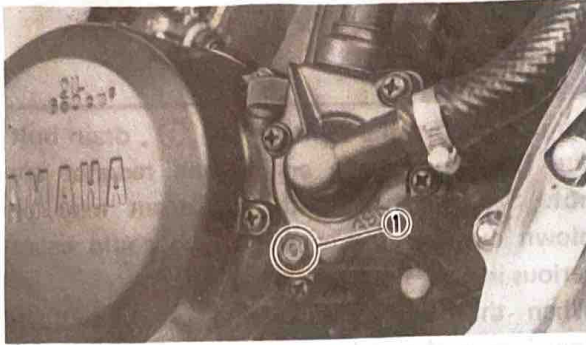


323 005

4. Fill:

- Coolant

Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.



COOLANT REPLACEMENT

1. Place a container under the engine.
2. Remove:
 - Drain bolt ①

3. Remove:
 - Radiator cap
 Drain the coolant completely. Thoroughly flush the cooling system with clean tap water.

CAUTION:

Take care so that coolant does not splash on painted surfaces. If it splashes, wash it away with water.

4. Install:
 - Drain bolt

www.legends-yamaha-enduro.com



Drain Bolt:
10 Nm (1.0 m·kg, 7.2 ft·lb)

5. Fill:
 - Coolant
 Refer to "CHAPTER 1. — FUEL, OIL AND COOLANT" section.

NOTE:

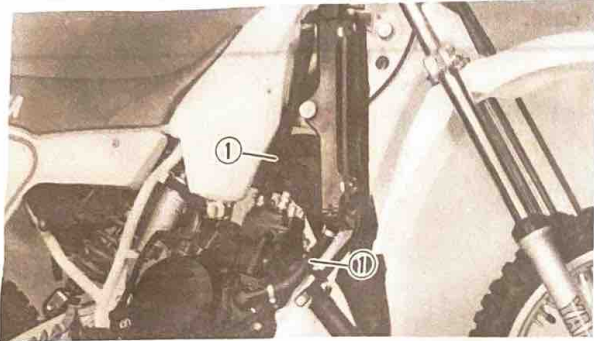
Before filling the coolant into the radiator, check the cooling system for damage or loose joints.

6. Install:
 - Radiator cap
7. Start the engine and warm up the engine for several minutes.



8. Inspect:

- Cooling system
Coolant leaks → Repair.
- Coolant level
Coolant level low → Fill.
Fill the coolant until it reaches the top of the radiator.



RADIATOR HOSE INSPECTION

1. Inspect:

- Radiator hose ①
Crack/Damage → Replace.

2

TRANSMISSION OIL LEVEL INSPECTION

1. Start the engine and warm it up for several minutes.

2. Inspect:

- Transmission oil level
Oil level low → Add sufficient oil.

Transmission oil level inspection steps:

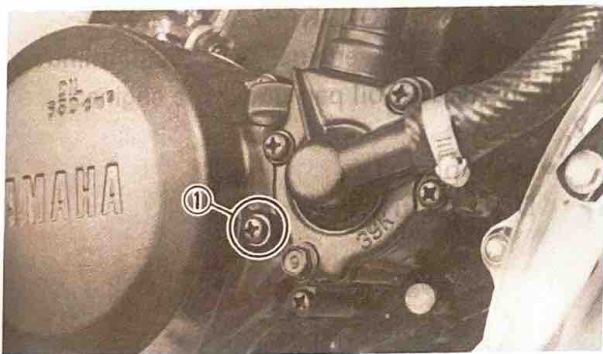
- Remove the checking bolt ① and inspect the oil level whether it is up to the hole bottom brim.

NOTE:

Be sure the machine is positioned straight up when inspecting the oil level.

WARNING:

Never attempt to remove the checking bolt just after high speed operation. The heated oil could spout out, causing danger. Wait until the oil cools down.





2

3. Fill:

- Transmission oil
Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.

CAUTION:

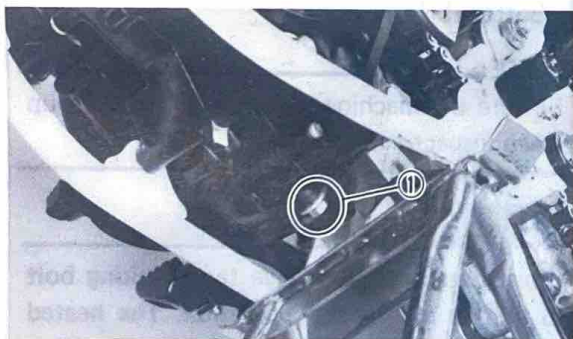
- Do not add any chemical additives. Transmission oil also lubricates the clutch and additives could cause clutch slippage.
- Be sure no foreign material enters the crankcase.

4. Inspect:

- Gasket (Checking screw)
Damage → Replace.

5. Install:

- Gasket
- Checking bolt



TRANSMISSION OIL REPLACEMENT

1. Warm up the engine for several minutes, then place an oil pan under the engine.

2. Remove:

- Drain plug ①
Drain the transmission oil.

3. Tighten:

- Drain plug



Drain Plug:
20 Nm (2.0 m·kg, 14 ft·lb)



4. Fill:

- Transmission oil

Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.

CAUTION:

- Do not add any chemical additives. Transmission oil also lubricates the clutch and additives could cause clutch slippage.
- Be sure no foreign material enters the crankcase.

2

5. Inspect:

- Transmission oil level

Refer to "TRANSMISSION OIL LEVEL INSPECTION" section.

www.legends-yamaha-enduros.com

AIR FILTER CLEANING

NOTE:

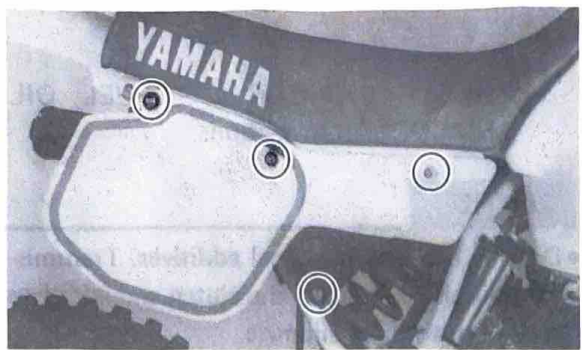
Proper air filter maintenance is the biggest key to preventing premature engine wear and damage.

CAUTION:

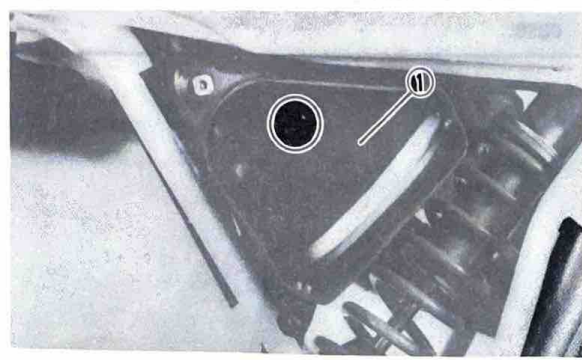
Never run the engine without the air filter element in place; this would allow dirt and dust to enter the engine and cause rapid wear and possible engine damage.



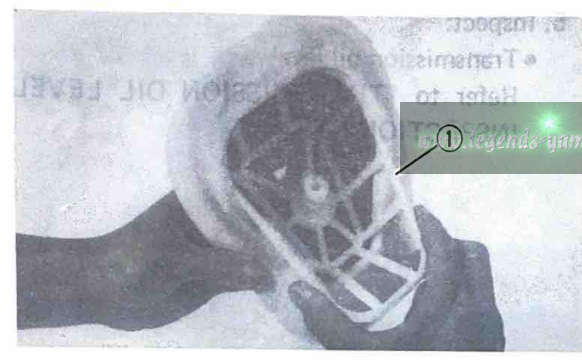
AIR FILTER CLEANING



1. Remove:
 - Side cover (Right)

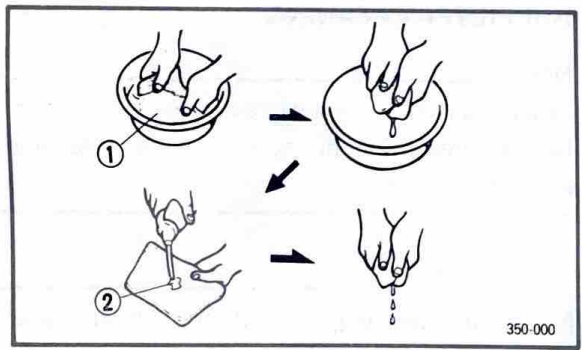


2. Remove:
 - Air filter element ①



3. Remove:
 - Air filter guide ①

2



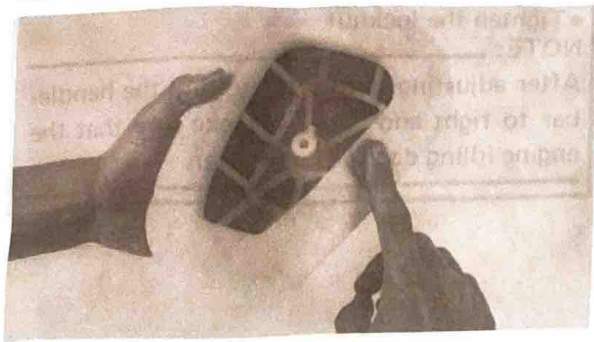
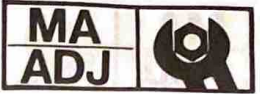
4. Clean:
 - Air filter element
 - Clean it with solvent ① .

NOTE: _____
After cleaning, remove the remaining solvent by squeezing the element.

5. Inspect:
 - Element
 - Damage → Replace.
6. Apply:
 - Foam-air-filter oil ②
7. Squeeze out the excess oil.

NOTE: _____
The element should be wet but not dripping.

EXHAUST SYSTEM INSPECTION/ THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK



8. Apply:
 - Lithium soap base grease to the sealing edge.
9. Install:
 - Air filter element
 - Side cover (Right)

EXHAUST SYSTEM INSPECTION

1. Inspect:
 - Exhaust pipe
 - Muffler
 - Crack/Damage → Replace.
2. Inspect:
 - Gasket
 - Exhaust gas leaks → Replace.

2

CHASSIS

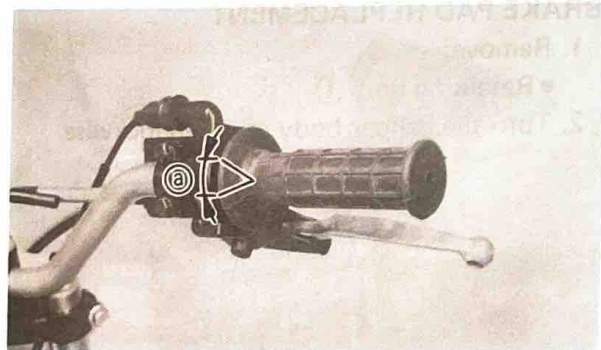
THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK

NOTE:

Before adjusting the throttle cable free play, the engine idle speed should be adjusted.

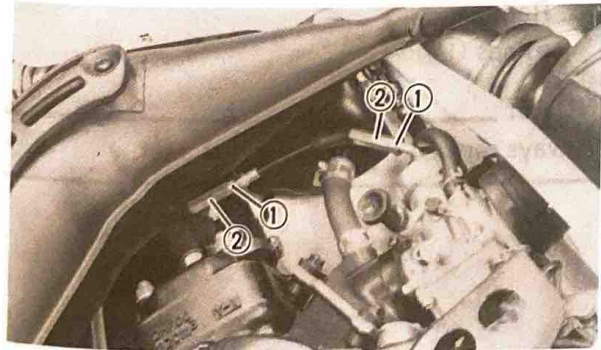
1. Check:
 - Throttle cable free play ①
 - Out of specification → Adjust.

	Free Play: 3 ~ 5 mm (0.12 ~ 0.20 in)
--	--



2. Adjust:
 - Throttle cable free play

Throttle cable free play adjustment steps: <ul style="list-style-type: none"> ● Loosen the locknut ① ● Turn the adjuster ② in or out until the specified free play is obtained.
--

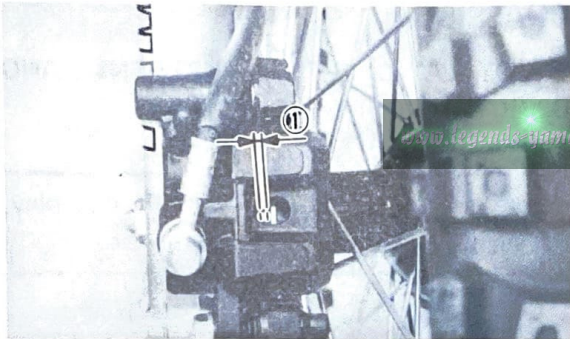


2

- Tighten the locknut.

NOTE:
After adjusting the free play, turn the handle-bar to right and left, and make sure that the engine idling does not run faster.

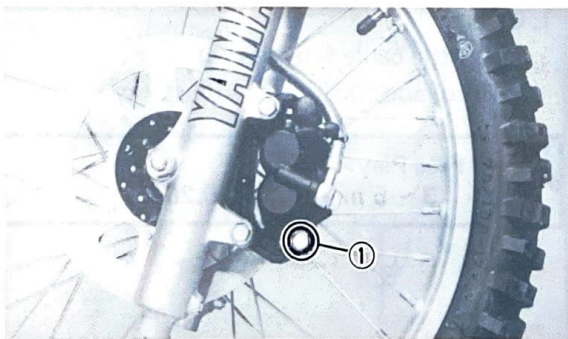
3. Check:
 - Throttle grip operation
 - Unsmooth operation → Repair.



BRAKE PAD INSPECTION

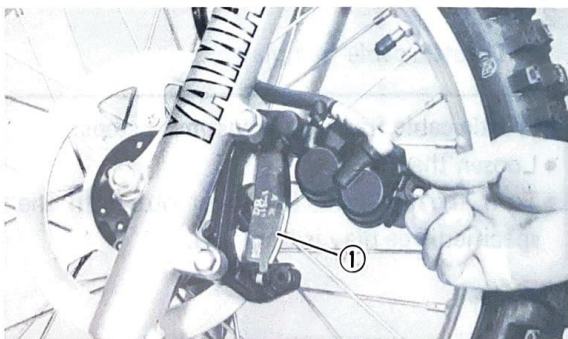
1. Remove:
 - Rubber plug
2. Inspect:
 - Brake pads
 - Over wear limit ① → Replace as a set.

 **Front Brake Pad Wear Limit:**
0.8 mm (0.03 in)



BRAKE PAD REPLACEMENT

1. Remove:
 - Retaining bolt ①
2. Turn the caliper body counterclockwise.



3. Remove:
 - Pads ①

NOTE:
Always replace the brake pad as a set.

FRONT BRAKE ADJUSTMENT



4. Install:

- Brake pads
- Bolt

Hold the pads in the caliper bracket and turn the caliper body clockwise.



Bolt:
30 Nm (3.0 m·kg, 22 ft·lb)

FRONT BRAKE ADJUSTMENT

CAUTION:

Proper lever free play is essential to avoid excessive brake drag.

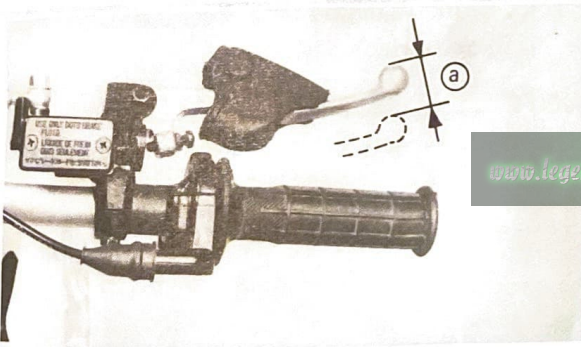
2

1. Check:

- Front brake lever free play (a)
Out of specification → Adjust.



Free Play:
10 ~ 20 mm (0.4 ~ 0.8 in)

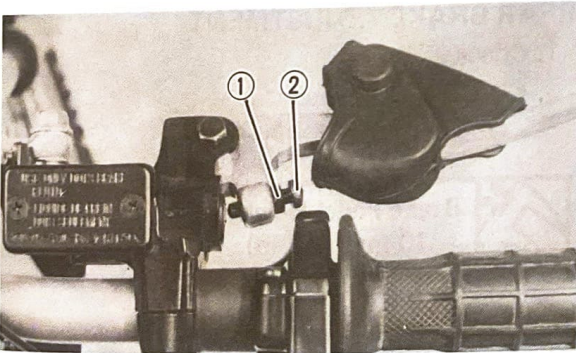


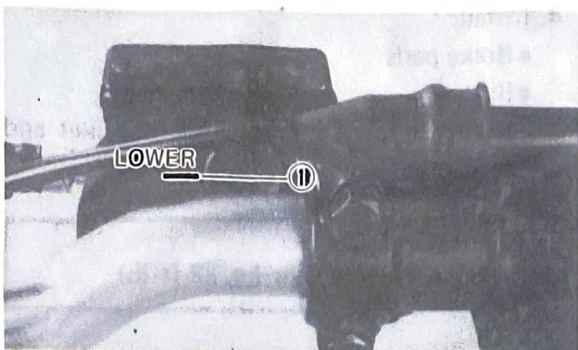
2. Adjust:

- Brake lever free play

Brake lever free play adjustment steps:

- Loosen the locknut (1).
- Turn the adjuster (2) in or out until the specified free play is obtained.
- Tighten the locknut.





BRAKE FLUID LEVEL INSPECTION

1. Inspect:

- Brake fluid level
Brake fluid level low → Replenish fluid.

① Lower level

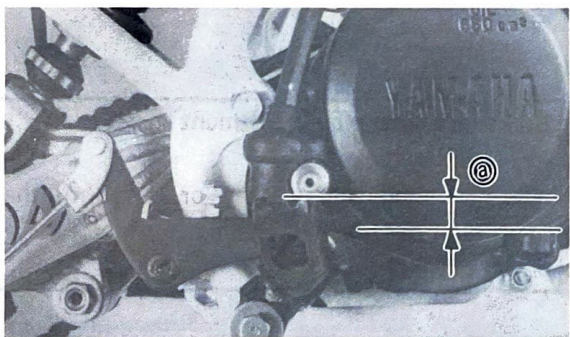
Recommended Brake Fluid:
DOT #3

WARNING:

- Use only designated quality brake fluid to avoid poor brake performance.
- Refill with same type and brand of brake fluid; mixing fluids could result in poor brake performance.
- Be sure that water or other contaminants do not enter master cylinder when refilling.
- Clean up spilled fluid immediately to avoid erosion of painted surfaces or plastic parts.

2

www.legends-yamaha-enduros.com

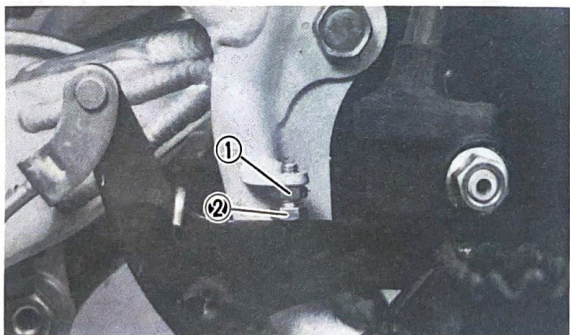


REAR BRAKE ADJUSTMENT

1. Check:

- Brake pedal height @
Out of specification → Adjust.

Brake Pedal Height:
10 mm (0.4 in)



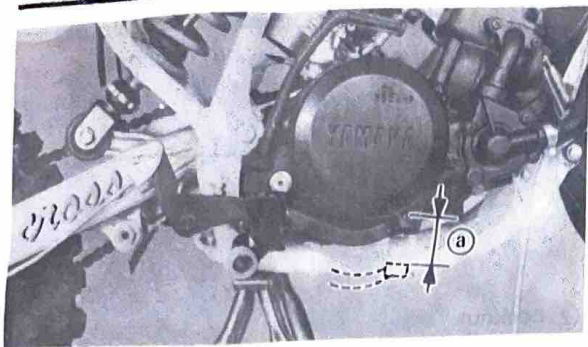
2. Adjust:

- Brake pedal height

Brake pedal height adjustment steps:

- Loosen the locknut ①.
- Turn the adjuster ② in or out until the specified height is obtained.
- Tighten the locknut.

CLUTCH ADJUSTMENT

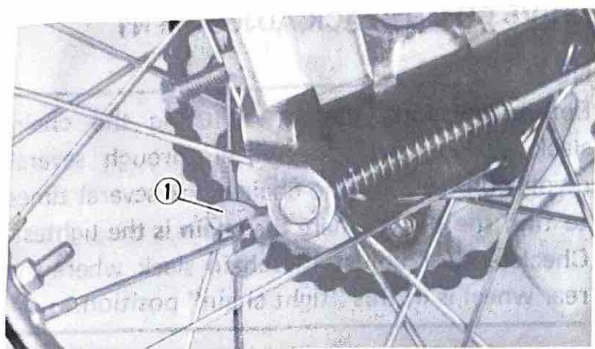


3. Check:
- Brake pedal free play ①
- Out of specification → Adjust.



Brake Pedal Free Play:
20 ~ 30 mm (0.8 ~ 1.2 in)

NOTE: _____
Before adjusting the free play, the pedal height should be adjusted.



4. Adjust:
- Brake pedal free play

Brake pedal free play adjustment steps:

- Turn the adjuster ① in or out until the specified free play is obtained.

www.legends-yamaha-enduros.com

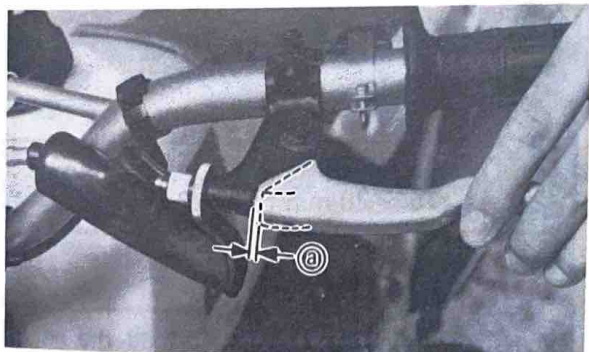
2

CLUTCH ADJUSTMENT

1. Check:
- Clutch lever free play ①
- Out of specification → Adjust.



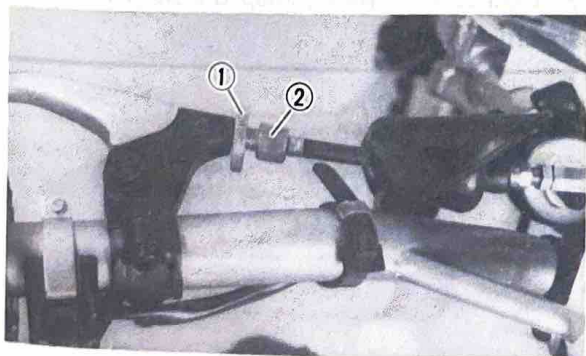
Clutch Lever Free Play:
2 ~ 3 mm (0.08 ~ 0.12 in)

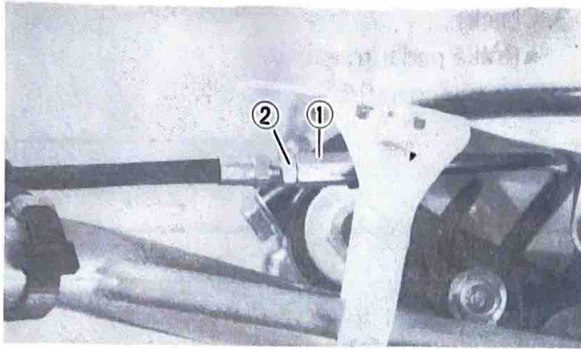


2. Adjust:
- Free play

Clutch lever free play adjustment steps:

- Loosen the locknut ①
- Turn the adjuster ② in or out until the specified free play is obtained.
- Tighten the locknut.





NOTE:

If the free play can not be adjusted at the clutch lever, adjust free play by the adjuster ① on the clutch cable.

② Locknut

DRIVE CHAIN SLACK ADJUSTMENT

NOTE:

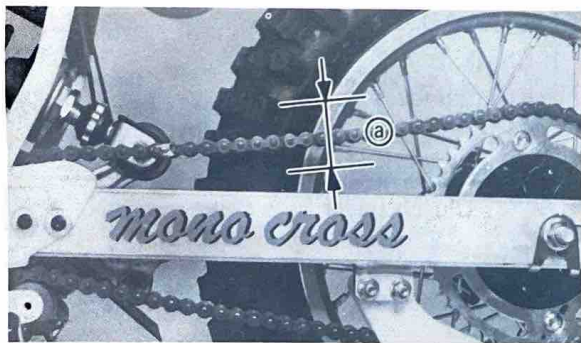
Before checking and/or adjusting the chain slack, rotate the rear wheel through several revolutions. Check the chain slack several times to find the point where the chain is the tightest. Check and/or adjust the chain slack where the rear wheel is in this "tight chain" position.

1. Place the machine on a level place, and hold it in an upright position.

NOTE:

The both wheels on the ground without ride on it.

2



2. Check:

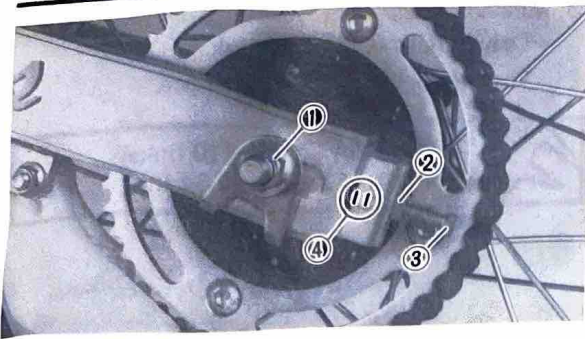
- Drive chain slack (a)
Out of specification → Adjust.



Drive Chain Slack:
15 ~ 20 mm (0.6 ~ 0.8 in)

CAUTION:

Excessive chain slack will overload the engine and other vital parts; keep the slack within the specified limits.



Drive chain slack adjustment steps:

- Loosen the axle nut ① and locknut ② .
- Turn the adjuster ③ in or out until the specified slack is obtained.

NOTE:

- Turn each adjuster exactly the same amount to maintain correct axle alignment. (There are marks ④ on each side of the swing arm).
- If the chain slack can not be adjusted, replace the sprockets and drive chain as a set.

- Tighten the axle nut and locknuts to specifications.



Locknut:

10 Nm (1.0 m·kg, 7.2 ft·lb)

Axle Nut:

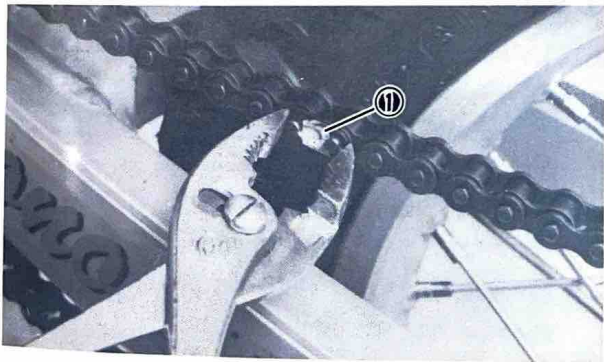
85 Nm (8.5 m·kg, 61 ft·lb)

2

3. Adjust:

- Brake pedal free play
Refer to "REAR BRAKE ADJUSTMENT" section.

www.legend-yamaha-enduros.com



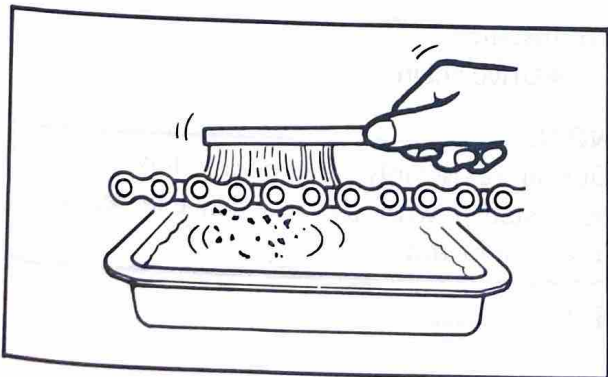
DRIVE CHAIN AND SPROCKETS INSPECTION

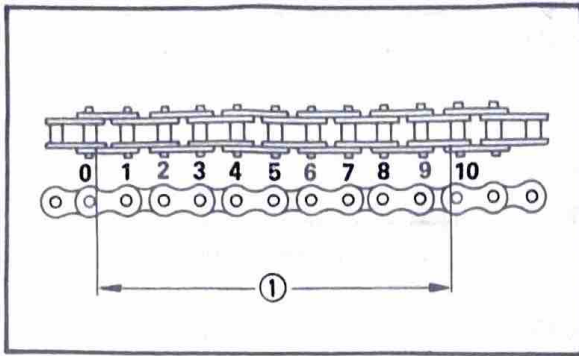
1. Remove:

- Master link clip ①
- Joint (Drive chain)
- Drive chain

2. Clean:

- Drive chain
Place it in solvent, and brush off as much dirt as possible. Then remove the chain from the solvent and dry the chain.



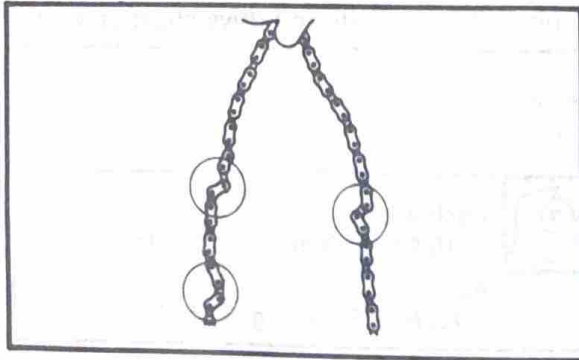


3. Measure:

- Drive chain length (10 links) ①
- Out of specification → Replace.

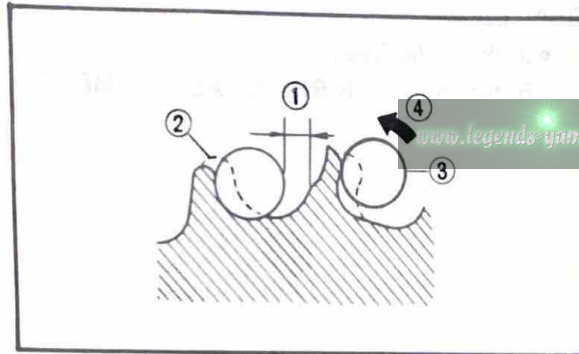


Drive Chain Length (10 links):
Limit: 123 mm (4.84 in)



4. Check:

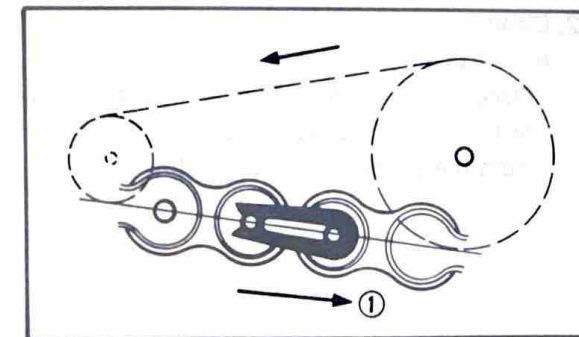
- Drive chain stiffness
- Clean and oil the chain and hold as illustrated.
- Stiff → Replace drive chain.



5. Inspect:

- Drive sprocket/Driven sprocket
- More than 1/4 teeth ① wear → Replace sprocket.
- Bent teeth → Replace sprocket.
- Refer to "CHAPTER 5. – REAR BRAKE, REAR WHEEL AND DRIVE CHAIN" section for replacement.

- ② Correct
- ③ Roller
- ④ Slip off



6. Install:

- Drive chain

NOTE:

During reassembly, the master link clip must be installed with the rounded end facing the direction of travel.

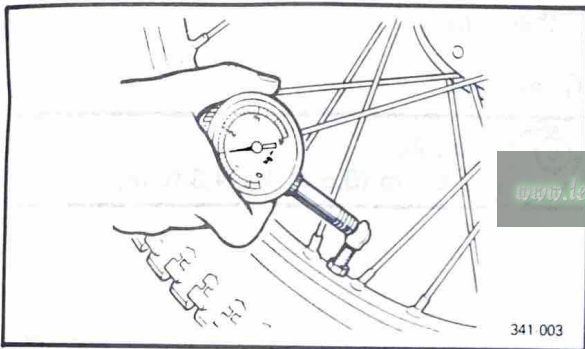
- ① Turning direction

7. Lubricate:
- Drive chain

	Recommended Chain Lube: Yamaha Chain Lube
---	---

8. Adjust:
- Drive chain slack
Refer to "DRIVE CHAIN SLACK ADJUSTMENT" section.
 - Rear brake free play
Refer to "REAR BRAKE ADJUSTMENT" section.

2



TIRE PRESSURE CHECK

1. Measure:
- Tire pressure (Cold tire pressure)
Out of specification → Adjust.

Cold tire pressure	Front	Rear
Standard	98 kPa (1.0 kg/cm ² , 14 psi)	98 kPa (1.0 kg/cm ² , 14 psi)

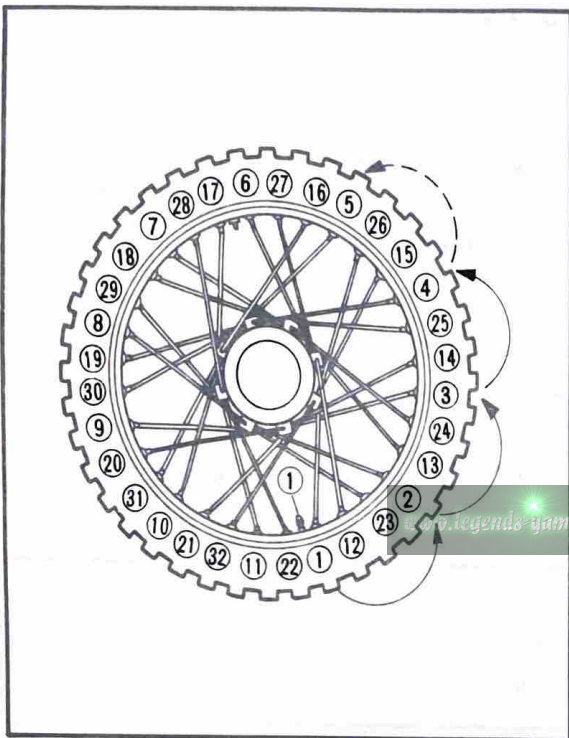
TIRE AND WHEEL INSPECTION

1. Inspect:
- Tire surface
Wear/Damage/Crack → Replace.
 - Wheel
Bend/Damage → Replace.

	Front	Rear
Tire Size	70/100-17 40M (BRIDGESTONE)	90/100-14 49M (BRIDGESTONE)
Type	KNOBBY TIRE	KNOBBY TIRE
Rim Size	1.40 x 17	1.60 x 14



2



SPOKES INSPECTION AND TIGHTENING

1. Inspect:
 - Spokes
 - Bend/Damage → Replace.
 - Loosen spoke → Retighten.
2. Tighten:
 - Spokes

NOTE: _____

- Be sure to retighten these spokes before and after break-in.
- After a practice or a race check spokes for looseness.

Spoke tightening steps:

- Perform the retightening at an interval of three spokes as shown below.
- The retightening will be completed at No. 32 after three turns of the wheel. If there still spokes that are short of torque, then repeat the same procedure.

① Air valve



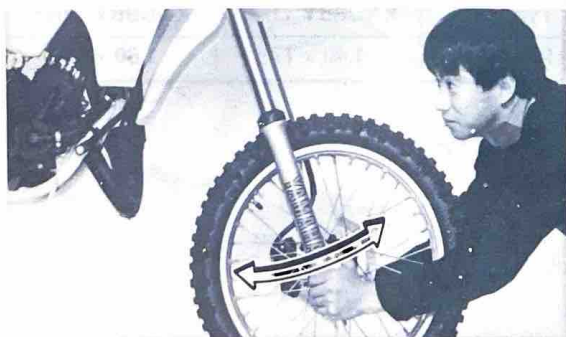
Nipple:
6 Nm (0.6 m·kg, 4.3 ft·lb)

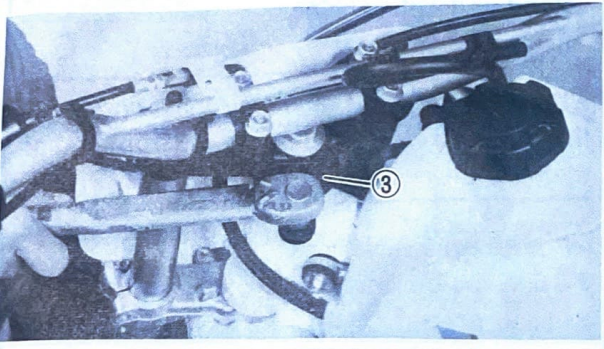
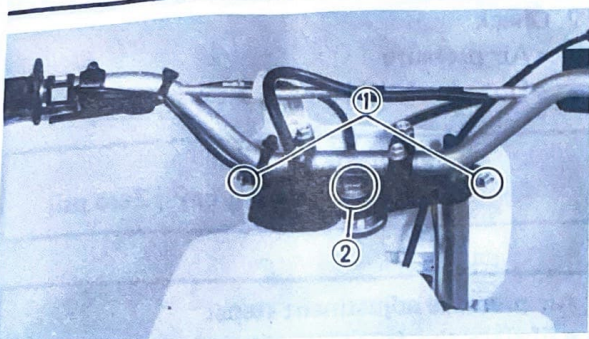
STEERING HEAD INSPECTION AND ADJUSTMENT

WARNING: _____

Securely support the machine so there is no danger of it falling over.

1. Elevate the front wheel by placing a suitable stand under the engine.
2. Check:
 - Steering assembly bearings
 - Grasp the bottom of the forks and gently rock the fork assembly back and forth.
 - Looseness → Adjust steering head.






3. Adjust:
- Steering head

Steering head adjustment steps:


- Loosen the pinch bolts ① and steering stem bolt ②.
- Tighten the ring nut using ring nut wrench ③ (YU-33975).


NOTE: _____
 Set the torque wrench to the Ring Nut Wrench so that they form a right angle.

 **Ring Nut:**
 8 Nm (0.8 m·kg, 5.8 ft·lb)

WARNING: _____
 Avoid over tightening.

- Tighten the steering stem bolt and pinch bolts.

 **Steering Stem Bolt:**
 59 Nm (5.9 m·kg, 43 ft·lb)

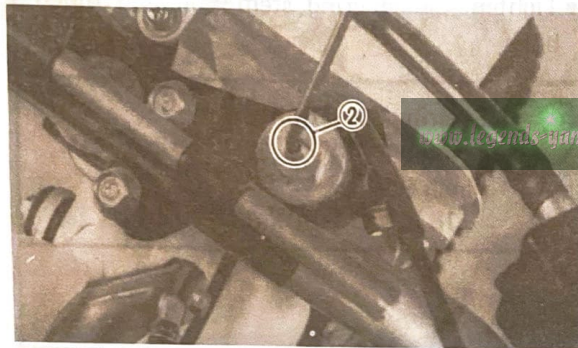
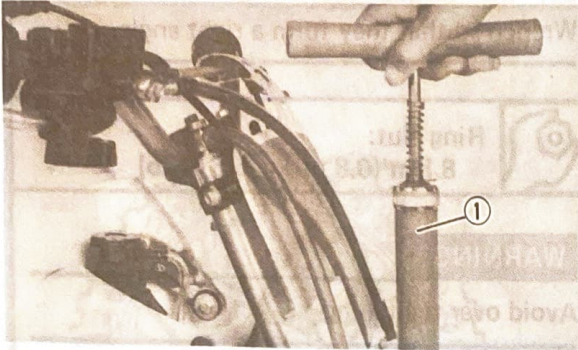
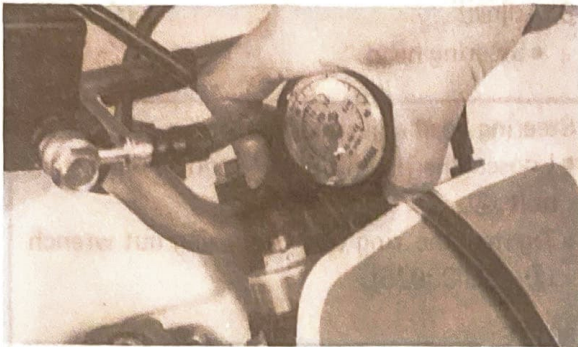
 **Pinch Bolt:**
 18 Nm (1.8 m·kg, 13 ft·lb)

2

FRONT FORK INSPECTION AND ADJUSTMENT

NOTE: _____
 For details of front fork setting, refer to the "RACE PREPARATION AND TUNING MANUAL". It is advisable to take a note of the standard setting data and specified range of adjustment.

1. Inspect:
- Oil seal
 Oil leakage → Replace.



2. Check:

- Air pressure
Out of specification → Adjust.

Standard Air Pressure:
Zero kPa (Zero kg/cm² , Zero psi)

Air pressure adjustment steps:

- Elevate the front wheel by placing a suitable stand under the engine.

NOTE:

When checking and adjusting the air pressure, there should be no weight on the front end of the machine.

- Remove the valve caps.
- Using the air check gauge, check and adjust the air pressure.

Stiffer → Increase the air pressure.
(Use an air pump ① or pressurized air supply.)

Softer → Decrease the air pressure.
(Release the air by pushing the valve ②.)

Standard Air Pressure:
Zero kPa (Zero kg/cm² , Zero psi)

Maximum Air Pressure:
118 kPa (1.2 kg/cm² , 17 psi)

CAUTION:

Never exceed the maximum pressure, or oil seal damage may occur.

WARNING:

The difference between both the left and right tubes should be 9.8 kPa (0.1 kg/cm² , 1.4 psi) or less.

- Install the valve caps securely.

2

FRONT FORK OIL REPLACEMENT

WARNING:

- Fork oil leakage can cause loss of stability and safe handling. Have any problem corrected before operating the machine.
- Securely support the machine so there is no danger of it falling over.

1. Elevate the front wheel by placing a suitable stand under the engine.

2. Remove:

- Air valve cap

NOTE:

Keep the valve open by pressing it for several seconds so that the air can be let out of the inner tube.

3. Loosen:

- Pinch bolt (Steering crown) ①

4. Remove:

- Cap bolt ②
- Drain screw ③

Drain the fork oil.

WARNING:

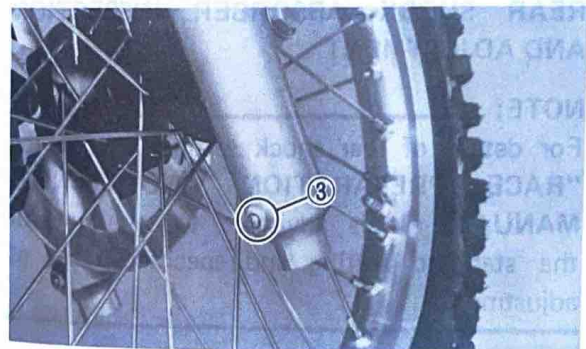
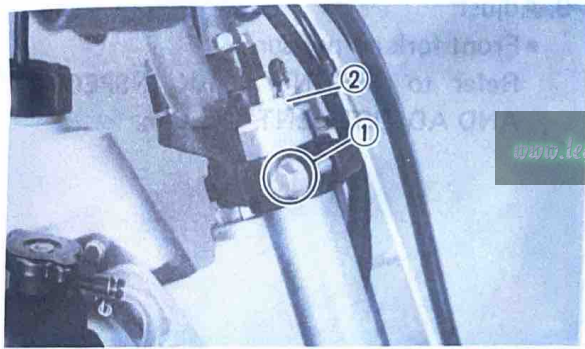
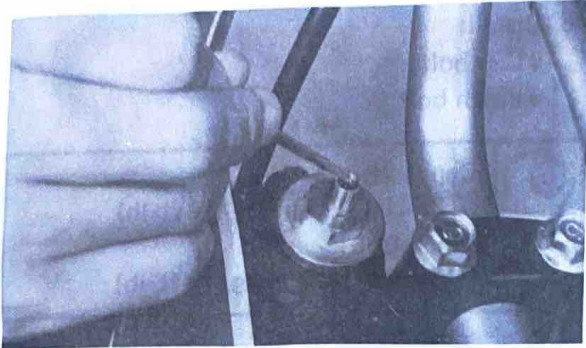
Do not let oil contact the disc brake components. If any oil should contact the brake components, it must be removed before the machine is operated. Oil will cause diminished braking capacity and will damage the rubber components of the brake assembly.

5. Inspect:

- O-ring (Cap bolt)
 - Gasket (Drain screw)
- Damage → Replace.

6. Install:


- Drain screw



2


7. Fill:

- Fork oil

	<p>Each Fork: 272 cm³ (9.6 Imp oz, 9.2 US oz)</p> <p>Recommended Oil: Yamaha Fork oil 10WT or equivalent</p> <p>After filling, pump the forks slowly up and down to distribute the oil.</p>
---	--

8. Install:

- Cap bolt
- Pinch bolt

	<p>Cap Bolt: 23 Nm (2.3 m·kg, 17 ft·lb)</p> <p>Pinch Bolt: 18 Nm (1.8 m·kg, 13 ft·lb)</p>
---	---

9. Adjust:

- Front fork air pressure

Refer to "FRONT FORK INSPECTION AND ADJUSTMENT", section.

www.legends-yamaha-enduros.com

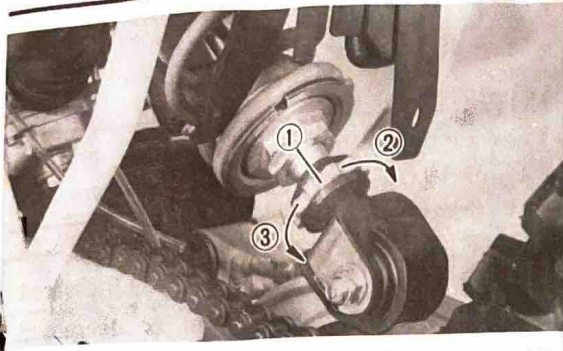
REAR SHOCK ABSORBER INSPECTION AND ADJUSTMENT

NOTE: _____

For details of rear shock setting, refer to the "RACE PREPARATION AND TUNING MANUAL". It is advisable to take note of the standard setting and specified range of adjustment.

1. Inspect:

- Rear shock absorber
Damage/Oil leakage → Replace.



2. Adjust:
- Rebound damping force.

Rebound damping force adjustment steps:

- Set the damping adjuster ① to standard position. (Standard position is 5 clicks back from the fully turned-in position.)
- Adjust the rebound damping force.

Turn in ②	Rebound damping force is increased.
Turn out ③	Rebound damping force is decreased.

Damping force minimum position:
5 clicks turns out
(from standard position)

Damping force maximum position:
5 clicks turns in
(from standard position)

CAUTION:

- Do not turn out (in) the adjuster from the damping force minimum (maximum) position.

www.legends-yamaha-enduros.com

2

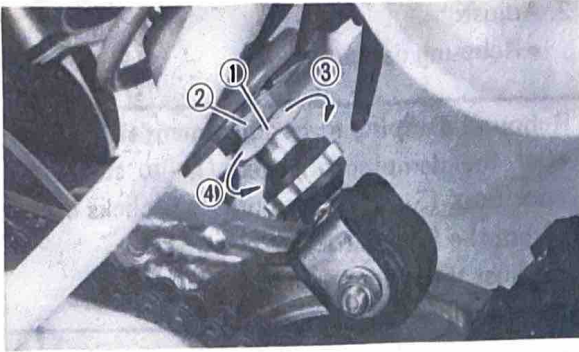
3. Adjust:
- Spring preload

Spring preload adjustment steps:

- Elevate the rear wheel by placing the suitable stand under the engine.



IGNITION TIMING ADJUSTMENT



- Loosen the locknut ①.
- Turn the adjuster ② in or out.

NOTE:

The length of the spring (Installed) changes 1.0 mm (0.04 in) per turn of the adjuster.

Turn in ③	Spring preload is increased.
Turn out ④	Spring preload is decreased.



Spring Fitting Length:

- Standard
221 mm (8.7 in)
- Minimum
212 mm (8.3 in)
- Maximum
232 mm (9.1 in)

CAUTION:

Never attempt to turn the adjuster beyond the maximum or minimum setting.

- Tighten the locknut.



Locknut:

55 Nm (5.5 m·kg, 40 ft·lb)

2

www.legends-yamaha-enc.com

ELECTRICAL

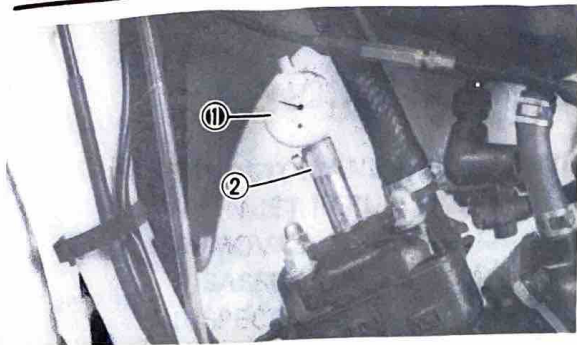
IGNITION TIMING ADJUSTMENT

1. Adjust:

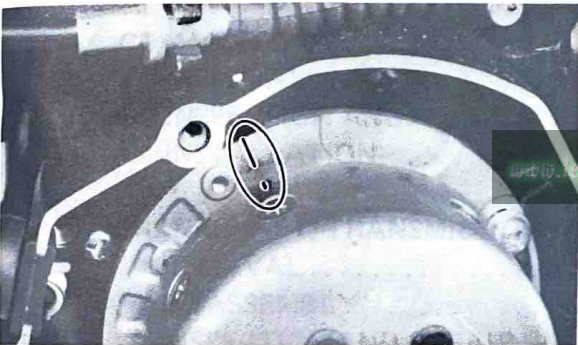
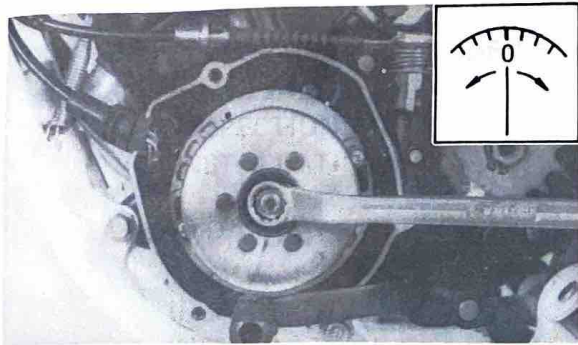
- Ignition timing

Ignition timing adjustment steps:

- Remove the exhaust pipe.
- Remove the spark plug.



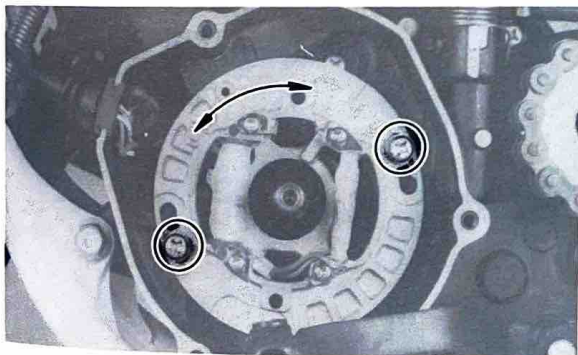
- Install the extension on the Dial Gauge (YU-03097) ① , and slide the dial gauge assembly into the Dial Gauge Stand (YU-01126) ② .
- Screw the dial gauge stand into the spark plug hole.
- Remove the crankcase cover (Left).
- Rotate the magneto rotor until the piston reaches top dead center (TDC). When this happens, the needle on the dial gauge will stop and reverse directions even though the rotor is being turned in the same direction. Set the dial gauge to Zero.
- From TDC, rotate the rotor clockwise until the dial gauge indicates that the piston is at a specified distance from TDC. At this point, the scribed marks on the rotor and the point, the scribed marks on the rotor and the stator plate should be aligned.



Ignition Timing:
1.16 mm (0.046 in)

- If the marks are not aligned, loosen the two stator retaining screws and rotate the stator until the marks line up. Tighten the screws and recheck the timing marks.

NOTE: _____
Refer to "CHAPTER 3 – CDI MAGNETO"
for the rotor removal.





CHAPTER 3.

ENGINE MAINTENANCE AND REPAIR

CARBURETOR AND REED VALVE	3-1
MAIN JET REPLACEMENT	3-2
REMOVAL	3-3
DISASSEMBLY	3-4
INSPECTION	3-5
ASSEMBLY AND INSTALLATION	3-8
CYLINDER HEAD, CYLINDER AND PISTON	3-10
REMOVAL	3-11
INSPECTION AND REPAIR	3-13
INSTALLATION	3-18
PRIMARY DRIVE GEAR, CLUTCH, KICK AXLE AND SHIFT SHAFT ...	3-21
REMOVAL	3-23
INSPECTION AND REPAIR	3-25
INSTALLATION	3-28
CDI MAGNETO	3-32
REMOVAL	3-33
INSPECTION AND REPAIR	3-34
INSTALLATION	3-34
CRANKSHAFT, TRANSMISSION AND SHIFTER	3-36
REMOVAL	3-38
DISASSEMBLY	3-41
INSPECTION AND REPAIR	3-44
ASSEMBLY	3-46
INSTALLATION	3-49



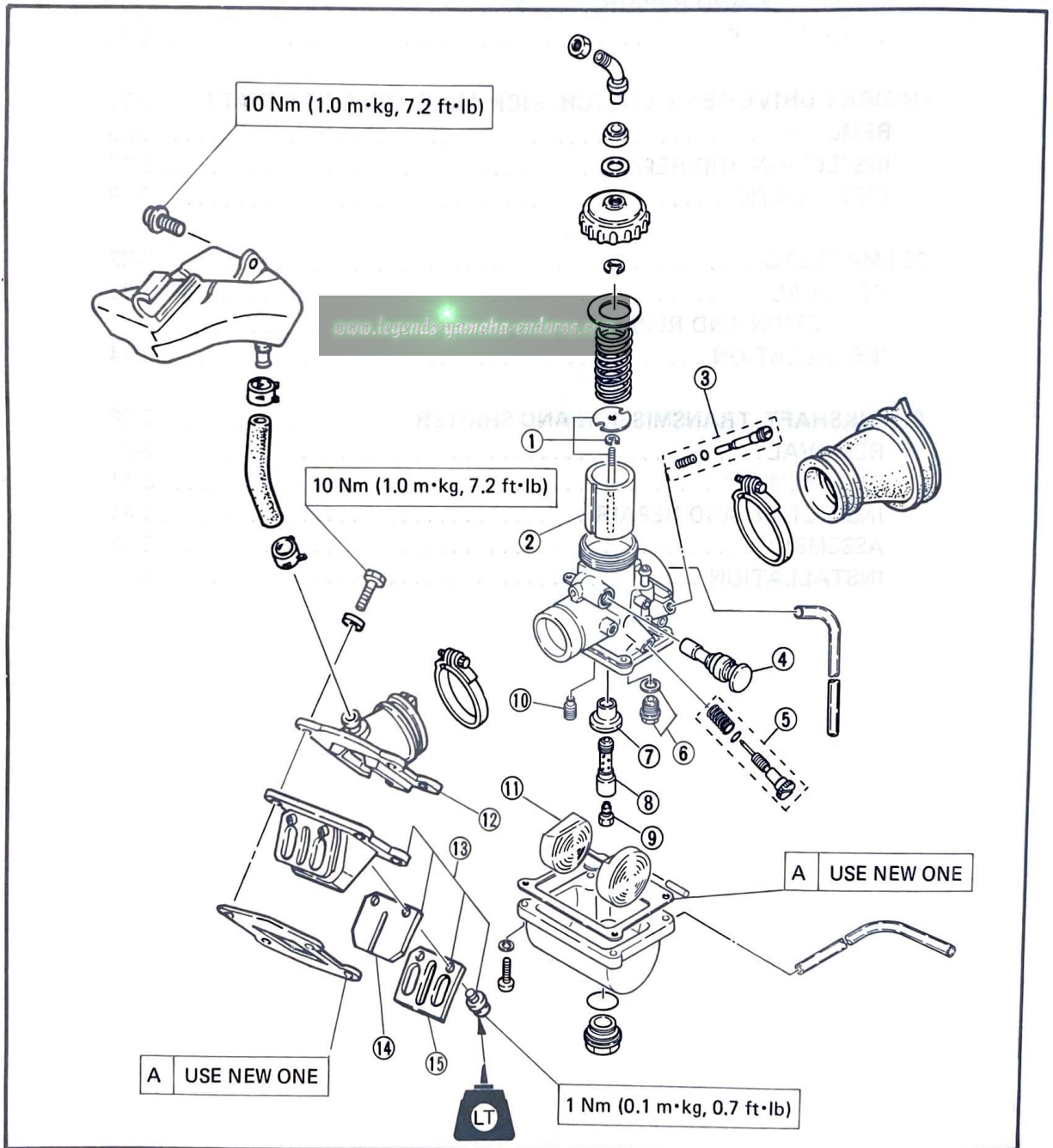
ENGINE MAINTENANCE AND REPAIR

CARBURETOR AND REED VALVE

- ① Jet needle set
- ② Throttle valve
- ③ Pilot air screw set
- ④ Starter plunger
- ⑤ Throttle stop screw set
- ⑥ Needle valve set
- ⑦ Main jet cover
- ⑧ Main nozzle
- ⑨ Main jet
- ⑩ Pilot jet
- ⑪ Float
- ⑫ Carburetor joint
- ⑬ Reed valve assembly
- ⑭ Reed valve
- ⑮ Valve stopper

SPECIFICATIONS	
Main jet	#280
Air jet	φ 1.0
Jet needle-clip position	5H22-3
Needle jet	Q-2
Cutaway	3.0
Pilot jet	#35
Air screw turns out	1-3/4
Starter jet	#40
Float height	20 ~ 22 mm (0.80 ~ 0.88 in)

3

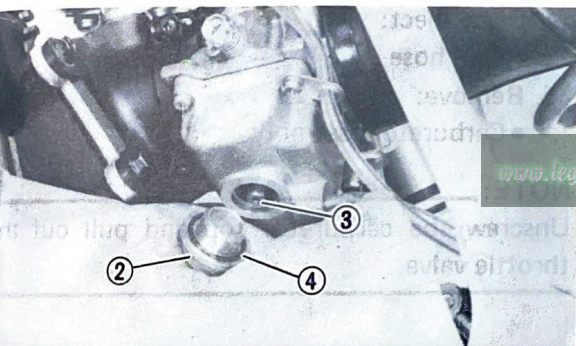
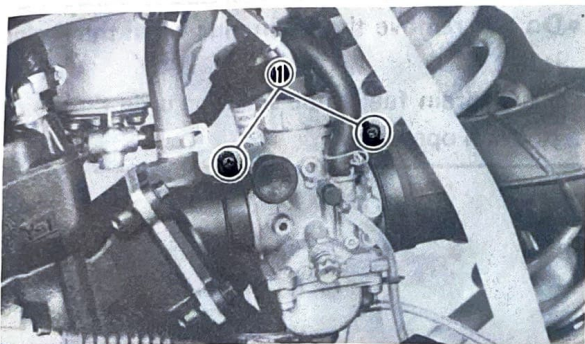




NOTE:

For details of carburetor tuning and setting parts, refer to the "RACE PREPARATION AND TUNING MANUAL" (90894-13400) and "CHAPTER 7 – SETTING CHARTS" section.

MAIN JET REPLACEMENT



1. Loosen:

- Clamps ①

2. Remove:

- Drain plug ②
- Main jet ③

3. Check:

- O-ring ④
- Damage → Replace.

WARNING:

When the drain plug is removed, the fuel in the float bowl will drain. Do not remove the plug when the engine is hot. Place a rag under the carb when removing the plug to catch the fuel. Remove the plug in a well-ventilated area, away from any open flame. Always clean and dry the machine after completing main jet changes.

4. Install:

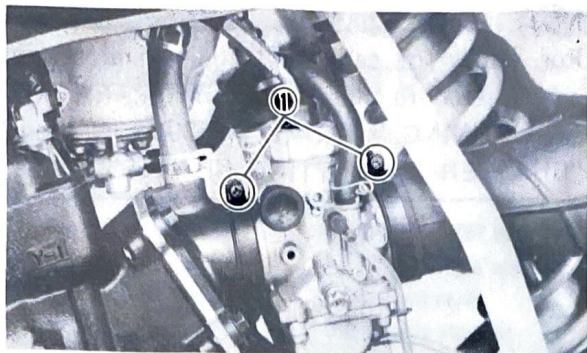
- Main jet
- Drain plug

5. Tighten:

- Clamps

IMPORTANT:

The carburetor has been set for operation at or near sea level; in most instances, it will not require changes. Some conditions, however, do demand carb setting changes to maintain performance. If this is the case, make the changes in small increments and check the results with a spark plug check. Improper settings can lead to poor performance or possible engine damage. If you are in doubt as to what setting changes to make, consult your Yamaha dealer.



REMOVAL

1. Turn the fuel cock to "OFF" position.
2. Loosen:
 - Clamps ①
3. Remove the drain plug and drain fuel.

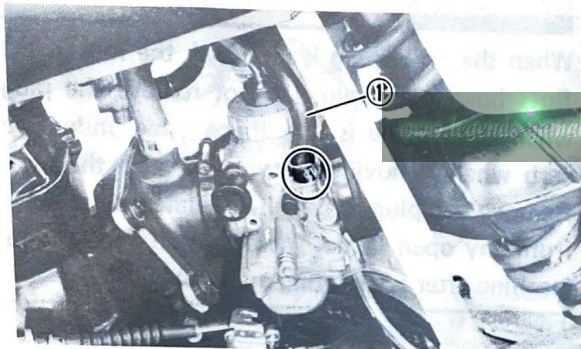
NOTE:

Place a rag under the carburetor to catch fuel.

WARNING:

- Do not remove the drain plug when the engine is hot.
- Never drain fuel while smoking or in the vicinity of an open flame.

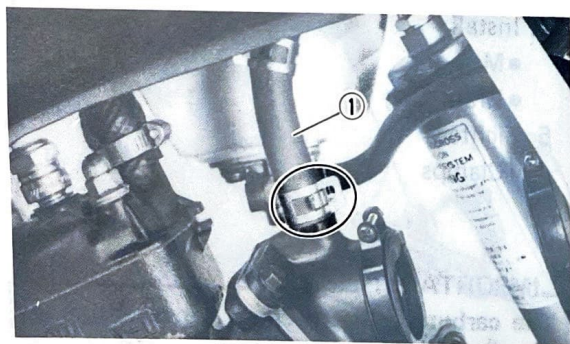
3



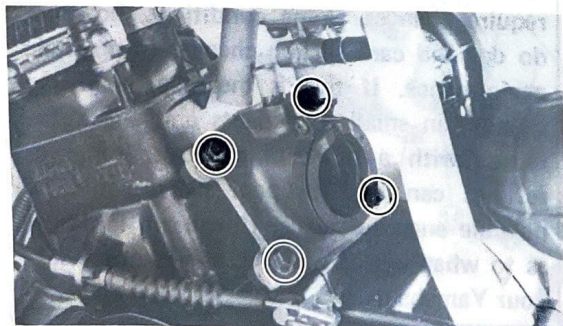
4. Disconnect:
 - Fuel hose ①
5. Remove:
 - Carburetor assembly

NOTE:

Unscrew the carburetor top and pull out the throttle valve.



6. Remove:
 - Y.E.I.S. Hose ①



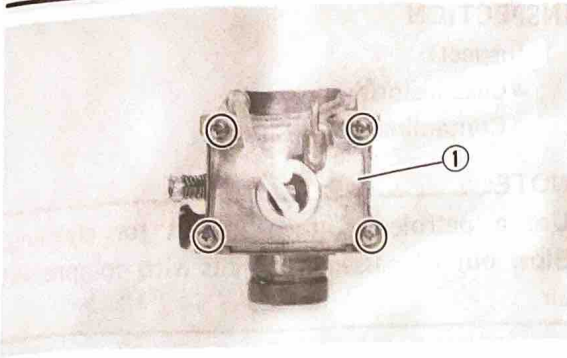
7. Remove:
 - Carburetor joint
 - Reed valve assembly



DISASSEMBLY

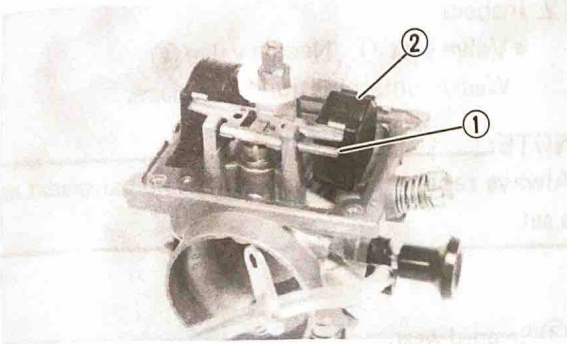
1. Remove:

- Float chamber cover ①



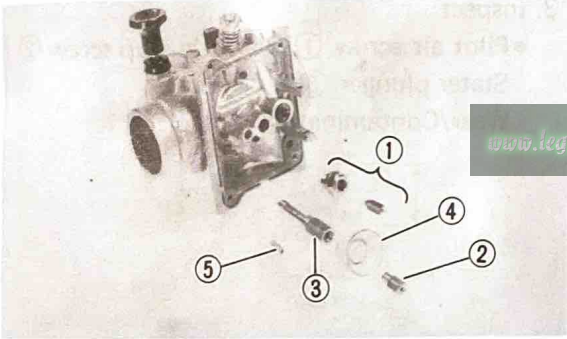
2. Remove:

- Float pin ①
- Float ②



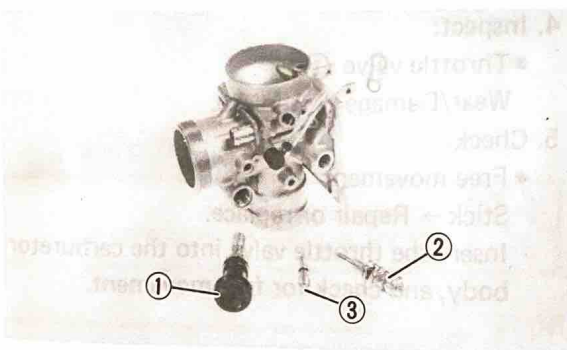
3. Remove:

- Needle valve set ①
- Main jet ②
- Main nozzle ③
- Main jet cover ④
- Pilot jet ⑤



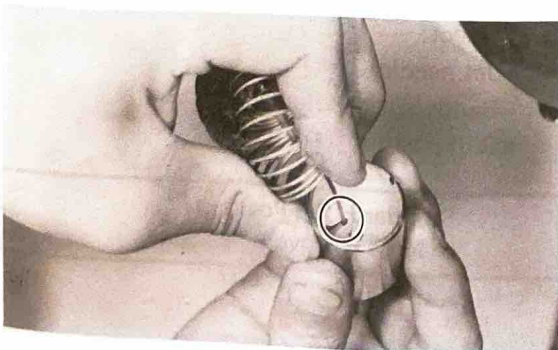
4. Remove:

- Starter plunger ①
- Throttle stop screw set ②
- Pilot air screw set ③



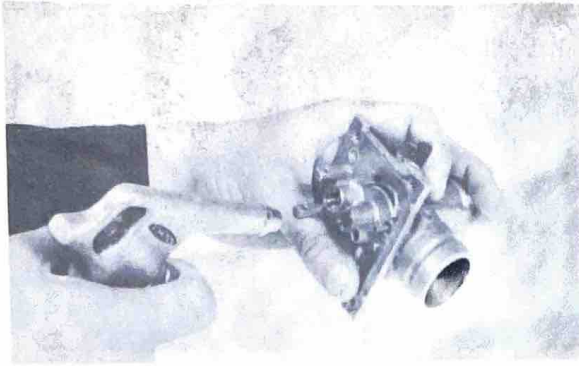
5. Remove:

- Jet needle set
- Throttle valve



NOTE:

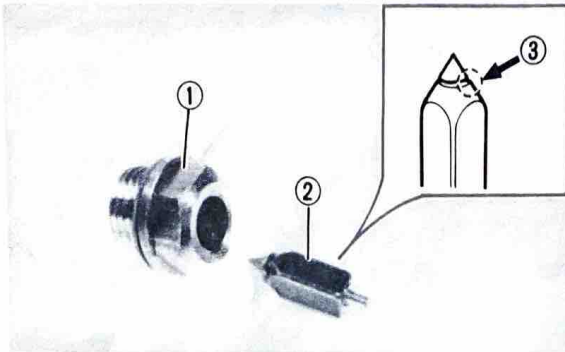
Compress the throttle valve spring and remove the throttle cable from the throttle valve.



INSPECTION

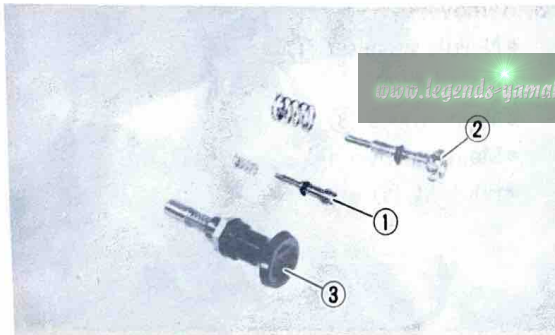
1. Inspect:
 - Carburetor body
Contamination → Clean.

NOTE:
Use a petroleum based solvent for cleaning.
Blow out all passages and jets with compressed air.



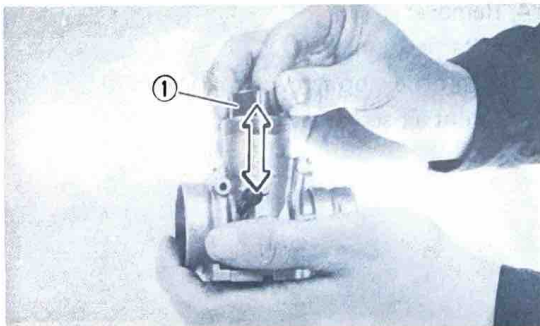
2. Inspect:
 - Valve seat ① / Needle valve ②
Wear/Contamination → Replace.

NOTE:
Always replace the needle valve and valve seat as a set.



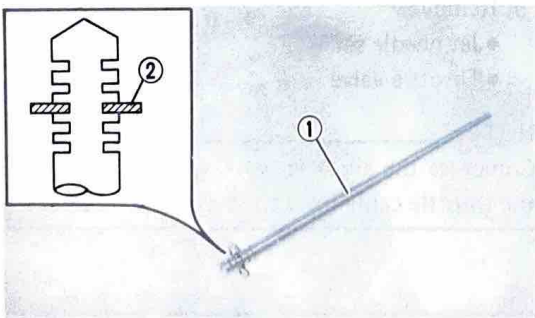
③ Stepped wear.

3. Inspect:
 - Pilot air screw ① / Throttle stop screw ② /
Stator plunger ③
Wear/Contamination → Replace.



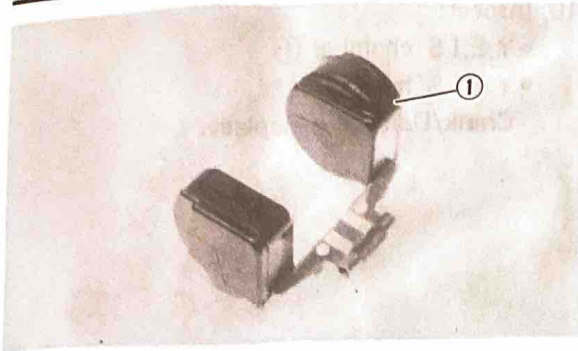
4. Inspect:
 - Throttle valve ①
Wear/Damage → Replace.

5. Check:
 - Free movement
Stick → Repair or replace.
Insert the throttle valve into the carburetor body, and check for free movement.



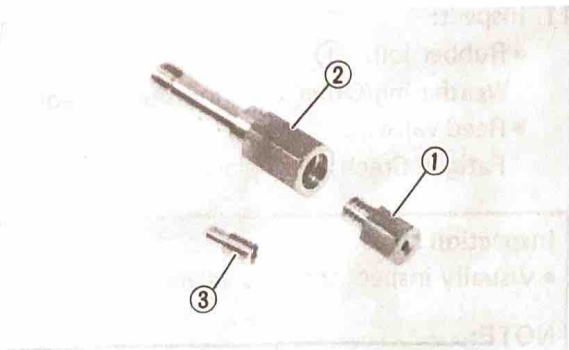
6. Inspect:
 - Jet needle ①
Bends/Wear → Replace.
 - Clip position ②

**Standard Clip Position:
No.3 Groove**



7. Inspect:

- Float ①
Damage → Replace.
- Gasket/O-ring
Damage → Replace.

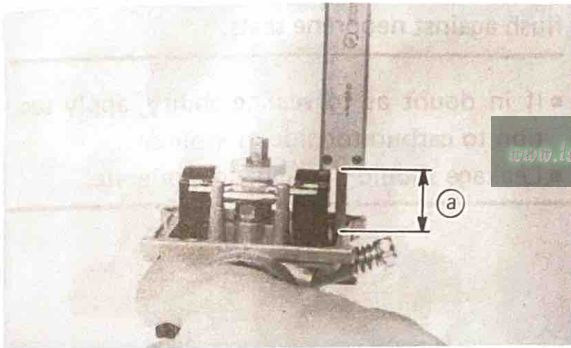


8. Inspect:

- Main jet ①
- Main nozzle ②
- Pilot jet ③
Damage → Replace.
Contamination → Clean.

NOTE:

- Blow out the jets with compressed air.



9. Measure:

- Float height (a)
Out of specification → Adjust.

Float Height (F.H.):
20 ~ 22 mm (0.80 ~ 0.88 in)

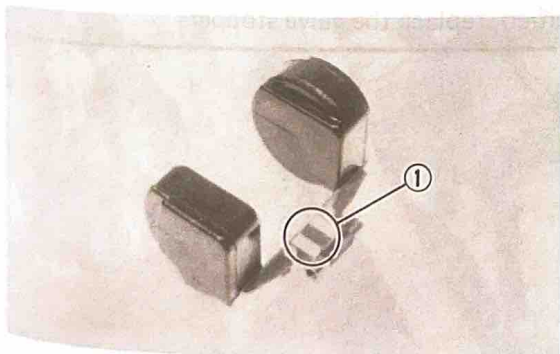
Measurement and adjustment steps:

- Hold the carburetor in an upside down position.
- Measure the distance between the mating surface of the float chamber (gasket removed) and top of the float using a gauge.

NOTE:

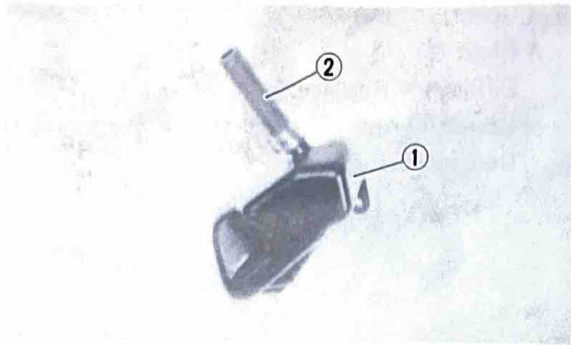
The float arm should be resting on the needle valve, but not compressing the needle valve.

- If the float height is not within specification, inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float tang ① on the float.
- Recheck the float height.



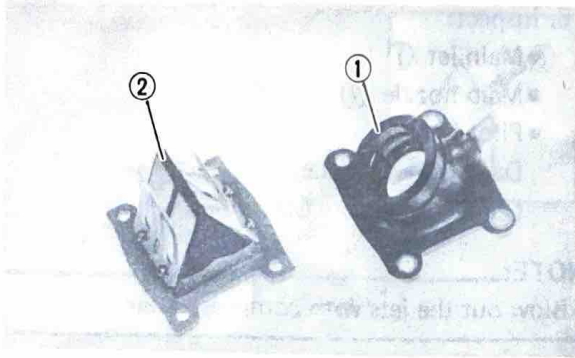


3



10. Inspect:

- Y.E.I.S. chamber ①
 - Y.E.I.S. hose ②
- Crank/Damage → Replace.



11. Inspect:

- Rubber joint ①
- Weathering/Other Deterioration → Replace.
- Reed valves ②
- Fatigue Cracks → Replace.

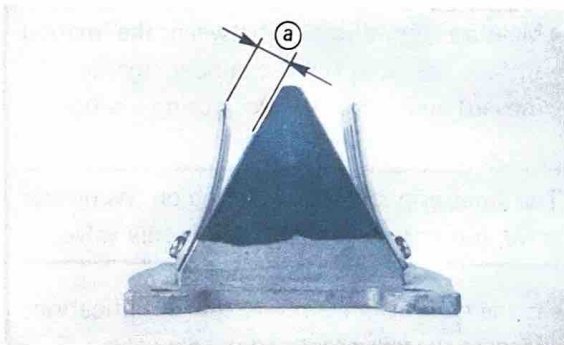
Inspection steps:

- Visually inspect the reed valves.

NOTE:

Correct reed valves should fit flush or nearly flush against neoprene seats.

- If in doubt as to sealing ability, apply suction to carburetor side of assembly.
- Leakage should be slight to moderate.



12. Measure:

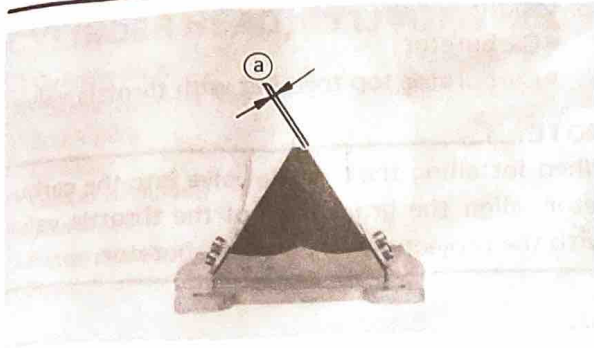
- Valve stopper height (a)
- Out of specification → Adjust stopper height or replace valve stopper.



Valve Stopper Height:
8.3 ~ 8.7 mm (0.32 ~ 0.34 in)

NOTE:

If it is 0.4 mm (0.016 in) more or less than specified, replace the valve stopper.

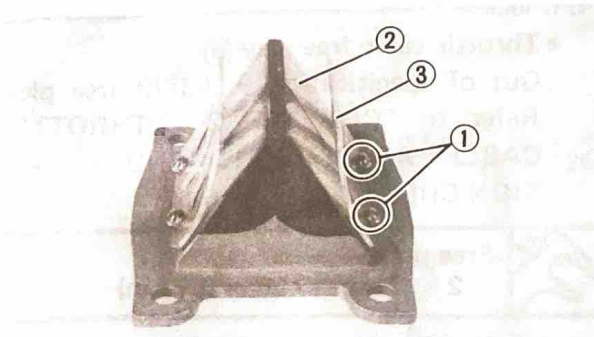


13. Measure:

- Reed valve bending (a)
- Out of specification → Replace.



Reed Valve Bending Limit:
0.3 mm (0.012 in)



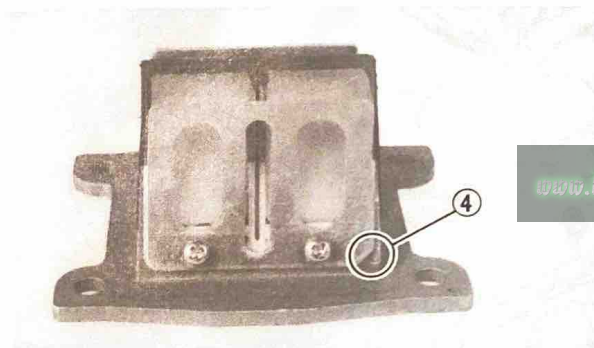
Reed valve and/or valve stopper replacement steps:

- Remove both screws (1) and replace the reed valve (2) and/or the valve stopper (3).
- Install the reed valve and the valve stopper.

NOTE:

Note the cut (4) in the lower corner of the reed and stopper plate.

- Tighten each screw gradually to avoid warping.



1 Nm (0.1 m·kg, 0.7 ft·lb)
LOCTITE®

www.legendo-gamaha-enduro.com

3

ASSEMBLY AND INSTALLATION

Reverse the "DISASSEMBLY" and "REMOVAL" procedures.

Note the following points.

1. Install:

- Gasket (Reed valve)
- Use new one.

2. Tighten:

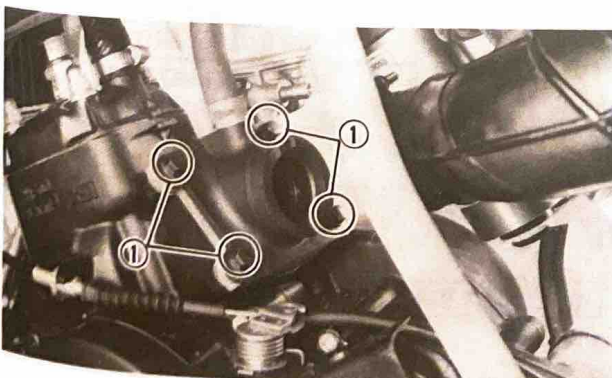
- Screws (1) (Carburetor joint)

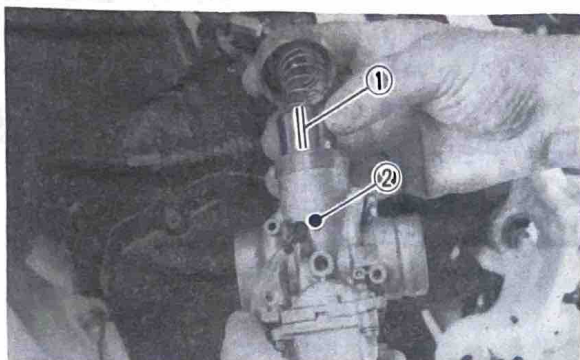


Screw (Carburetor joint):
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:

Tighten each screw gradually to avoid warping.



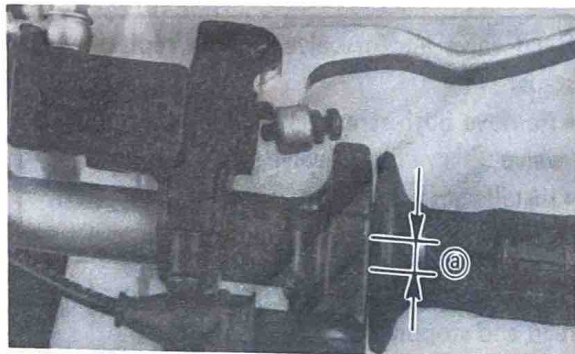


3. Install:

- Carburetor
- Carburetor top together with throttle valve

NOTE:

When installing the throttle valve into the carburetor, align the groove ① of the throttle valve with the projection ② of the carburetor.



4. Check:

- Throttle cable free play ③
- Out of specification → Adjust free play.
Refer to "CHAPTER 2 – THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK" section.



Free play:

2 ~ 3 mm (0.08 ~ 0.12 in)

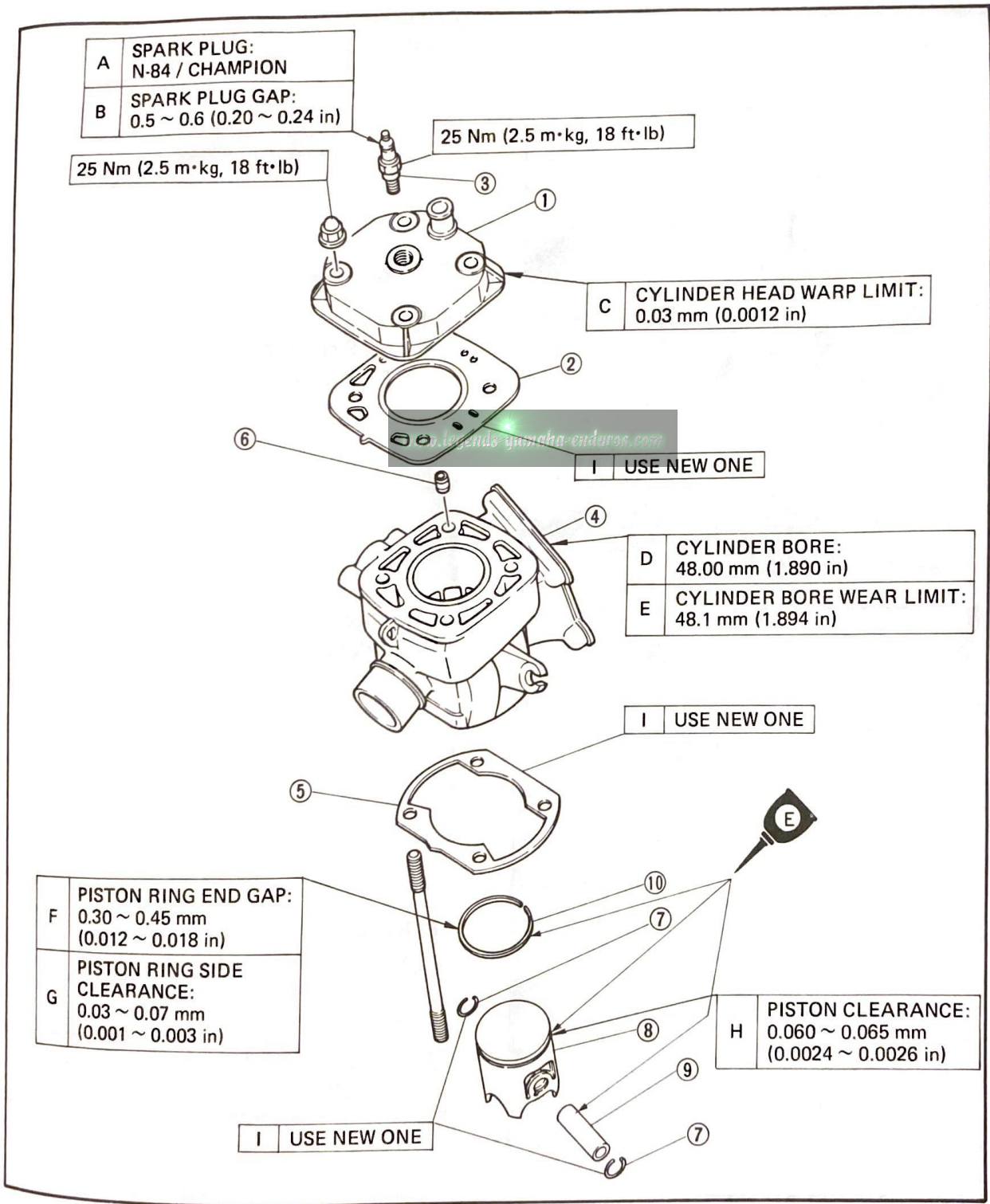
3



CYLINDER HEAD, CYLINDER AND PISTON

- ① Cylinder head
- ② Gasket (Cylinder head)
- ③ Spark plug
- ④ Cylinder
- ⑤ Gasket (Cylinder)
- ⑥ Dowel pin
- ⑦ Piston pin clip
- ⑧ Piston
- ⑨ Piston pin
- ⑩ Piston ring

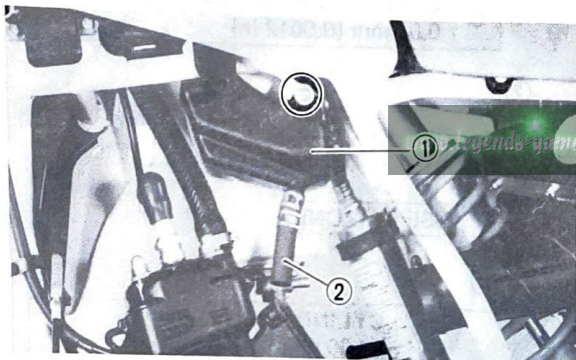
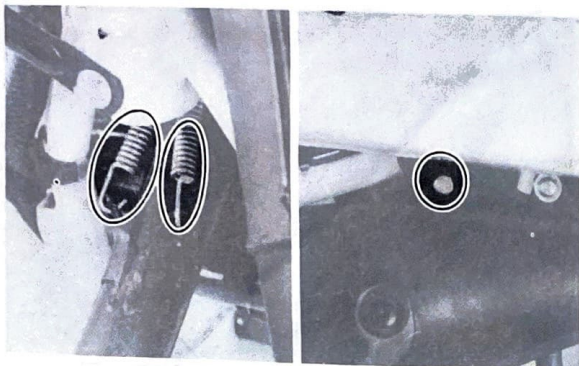
3



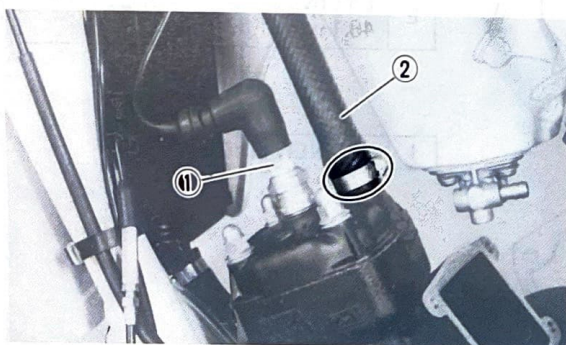


REMOVAL

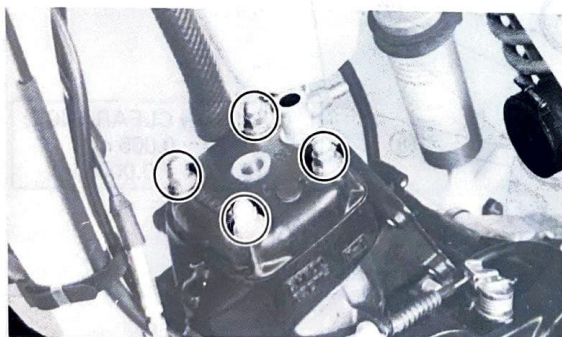
1. Drain:
 - Coolant
Refer to "CHAPTER 2. – COOLANT REPLACEMENT" section.
2. Remove:
 - Carburetor
 - Reed valve
Refer to "CARBURETOR AND REED VALVE – REMOVAL" section.
3. Remove:
 - Exhaust pipe



4. Remove:
 - Y.E.I.S chamber ①
 - Y.E.I.S hose ②



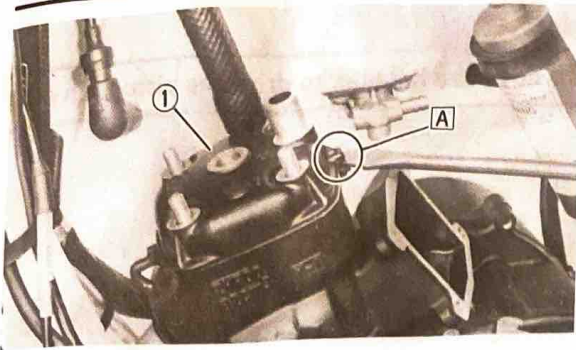
5. Remove:
 - Spark plug ①
 - Hose ②



6. Remove:
 - Nuts (Cylinder head)

CAUTION:

The cylinder head holding nut should be loosened 1/4 turn each time, to remove.

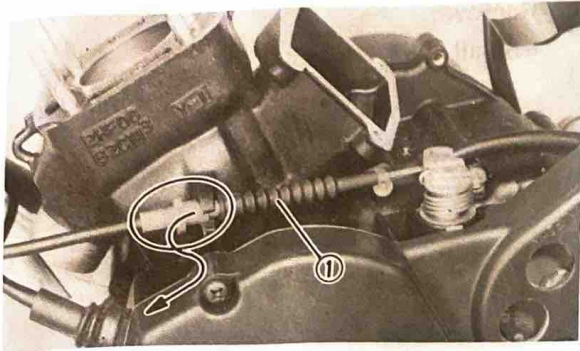


7. Remove:

- Cylinder head ①

NOTE: _____

If the cylinder head will not come off, use the lever guide **A** for removal.

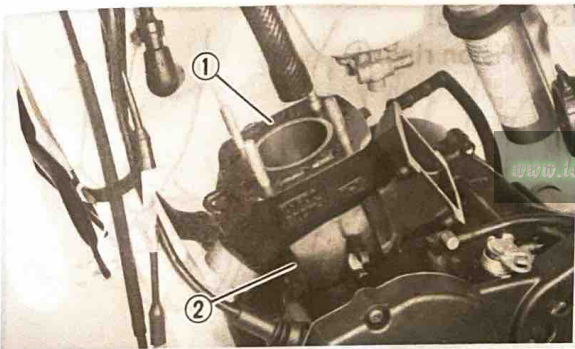


8. Remove:

- Clutch cable ①

NOTE: _____

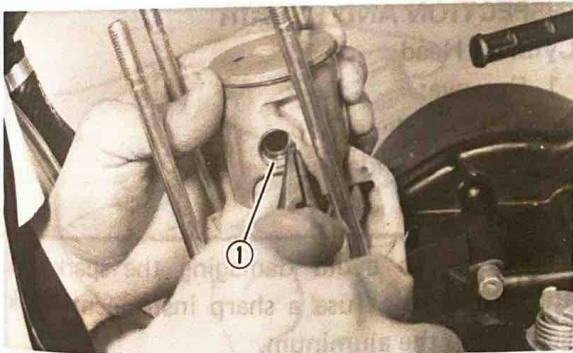
Loosen the clutch cable adjuster at the clutch lever when removing the clutch cable.



9. Remove:

- Gasket (Cylinder head) ①
- Cylinder ②
- Gasket (Cylinder)

www.legends-yamaha-enduros.com

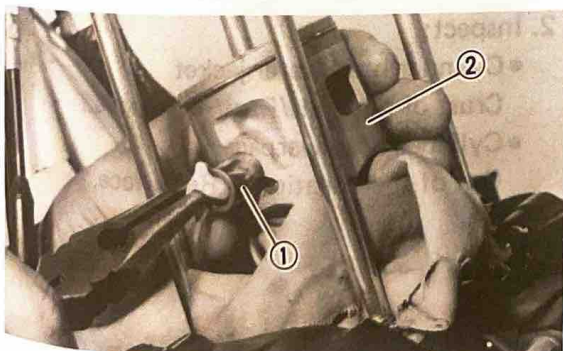


10. Remove:

- Piston pin clip ①

NOTE: _____

Before removing the piston pin clip, cover the crankcase with a clean rag so you will not accidentally drop the clip into the crankcase.



11. Remove:

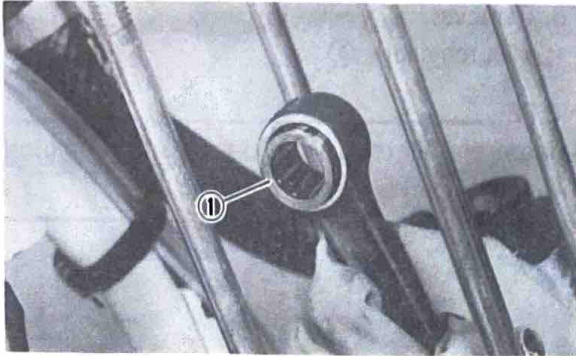
- Piston pin ①
- Piston ②

NOTE: _____

Before removing the piston pin, deburr the clip groove and pin hole area. If the piston pin groove is deburred and piston pin is difficult to remove, use Piston Pin Puller (YU-01304).

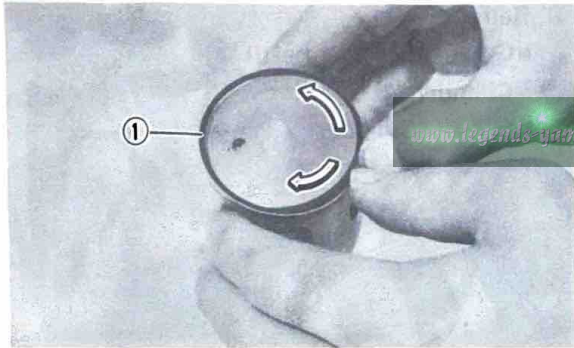
**CAUTION:**

Do not use a hammer to drive the piston pin out.



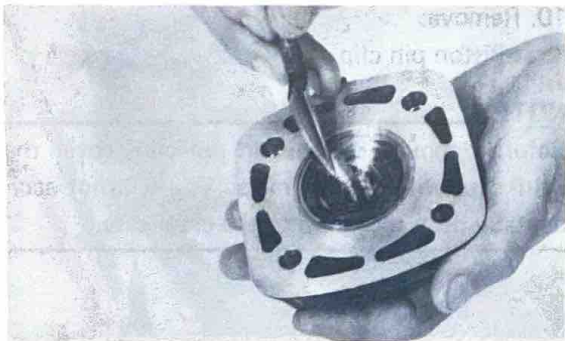
12. Remove:

- Small end bearing ①



13. Remove:

- Piston ring ①

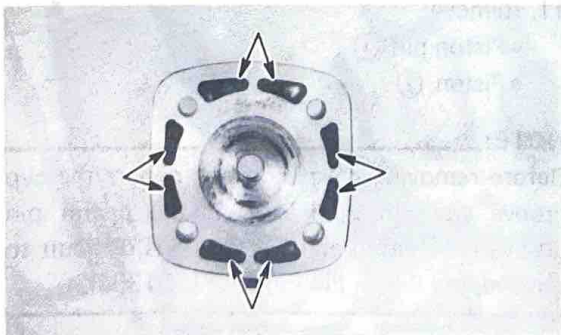
**INSPECTION AND REPAIR****Cylinder Head**

1. Remove:

- Carbon deposits
Use a rounded scraper.

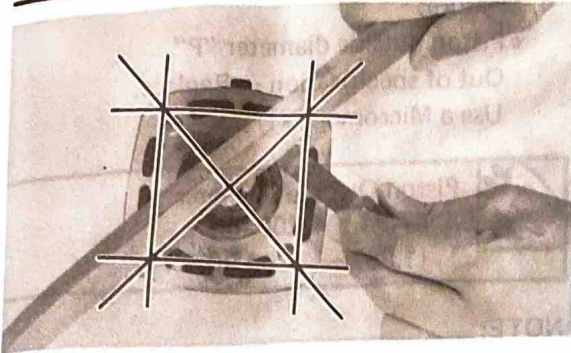
NOTE:

Take care to avoid damaging the spark plug threads. Do not use a sharp instrument. Avoid scratching the aluminum.



2. Inspect:

- Cylinder head water jacket
Crust of minerals/Rust → Remove.
- Cylinder head warpage
Out of specification → Re-surface.



Warpage measurement and re-surfacement steps:

- Attach a straightedge and a thickness gauge on the cylinder head.
- Measure the warpage.

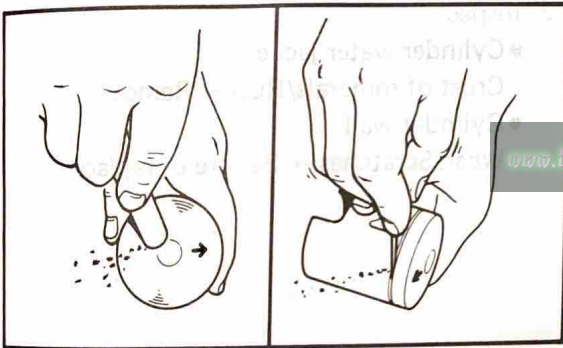
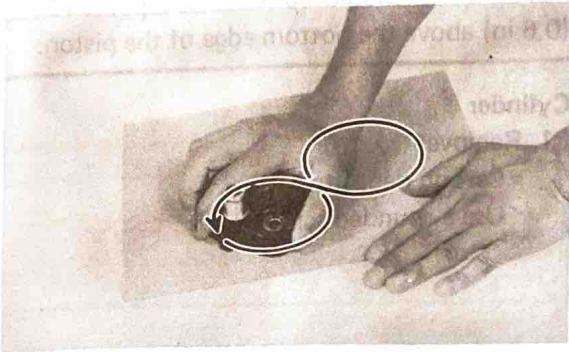


Warpage Limit:
0.03 mm (0.0012 in)

- If the warpage is out of specification, re-surface the cylinder head.
- Place a 400 ~ 600 grit wet sandpaper on the surface plate, and re-surface the head using a figure-eight sanding pattern.

NOTE:

Rotate the head several times to avoid removing too much material from one side.

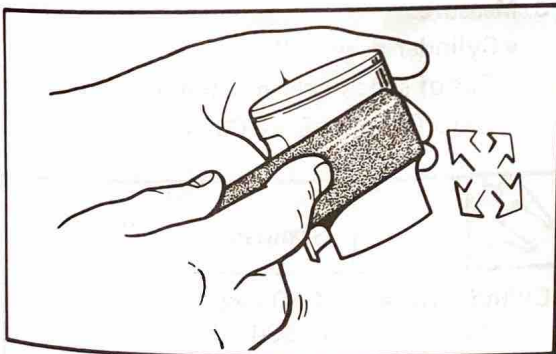


Piston

1. Remove:

- Carbon deposits
From the piston crown and ring grooves.

www.legends-yamaha-enduros.com



2. Remove:

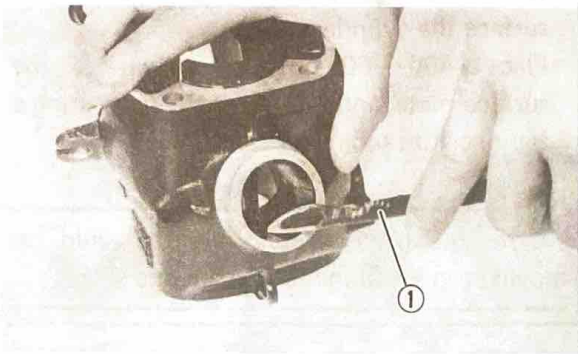
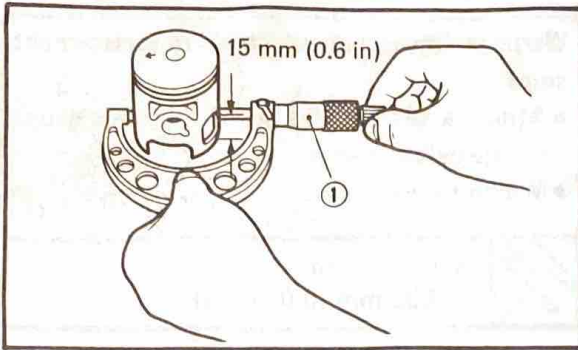
- Score marks and lacquer deposits
From the sides of piston.
Use a 600 ~ 800 grit wet sandpaper.

NOTE:

Sand in a crisscross pattern. Do not sand excessively.

3. Inspect:

- Piston wall
Wear/Scratches/Damage → Replace.



4. Measure:

- Piston outside diameter "P"
Out of specification → Replace.
Use a Micrometer ①.



Piston Outside diameter:
47.94 ~ 48.00 mm
(1.887 ~ 1.890 in)

NOTE:

Measurement should be made at a point 15 mm (0.6 in) above the bottom edge of the piston.

Cylinder

1. Remove:

- Carbon deposits
Use a rounded scraper ①.

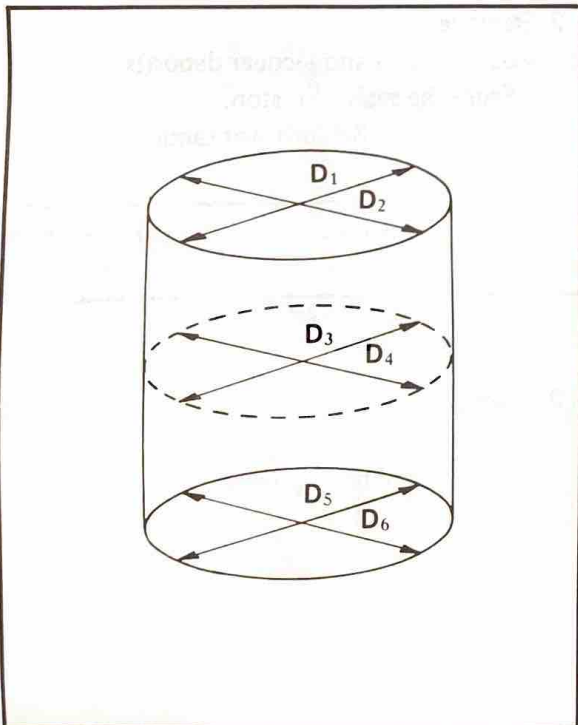
2. Inspect:

- Cylinder water jacket
Crust of minerals/Rust → Remove.
- Cylinder wall
Wear/Scratches → Rebore or replace.

www.legends-yamaha-enduros.com

3. Measure:

- Cylinder bore "C"
Out of specification → Rebore.
Use a Cylinder Bore Gauge.



	Standard	Wear Limit
Cylinder Bore "C"	48.0 mm (1.890 in)	48.1 mm (1.894 in)
Taper "T"	—	0.05 mm (0.002 in)
Out of Round "R"	—	0.01 mm (0.0004 in)

C = Maximum D

T = (Maximum D₁ or D₂) – (Minimum D₅ or D₆)

R = (Maximum D₁, D₃ or D₅) – (Minimum D₂, D₄ or D₆)



	Size
Standard	48.00 mm (1.910 in)
Oversize 1	48.25 mm (1.900 in)
Oversize 2	48.50 mm (1.890 in)

4. Measure:

- Piston Clearance

Out of specification → Rebore cylinder or replace piston.



Piston Clearance:
 0.060 ~ 0.065 mm
 (0.0024 ~ 0.0026 in)

$$A = C - P$$

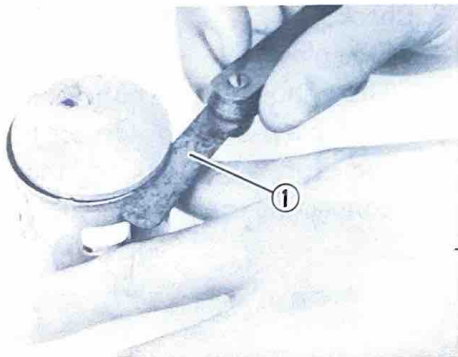
A: Piston clearance

C: Cylinder bore

P: Piston outside diameter

www.legends-yamaha-enduros.com

3



Piston Ring

1. Measure:

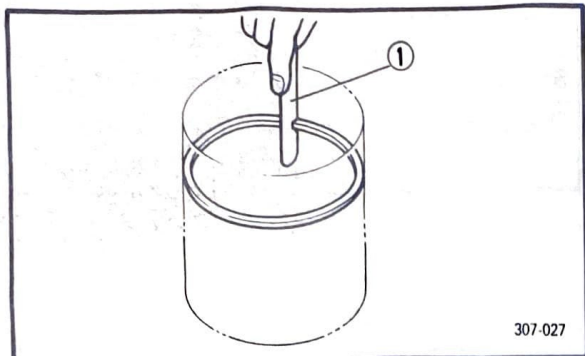
- Side clearance

Out of specification → Replace piston and/or ring.

Use a Feeler Gauge ① .



Side Clearance:
 0.03 ~ 0.07 mm (0.001 ~ 0.003 in)
 < Limit >
 0.10 mm (0.004 in)



307-027

2. Install:

- Piston ring
(Into the cylinder)
Push the ring with the piston crown.

3. Measure:

- End gap
Out of specification → Replace rings as a set.
Use a Feeler Gauge ①.



Piston Ring End Gap:
0.30 ~ 0.45 mm (0.012 ~ 0.018 in)
< Limit >
0.6 mm (0.024 in)

Oversize Piston Ring	
Oversize 1	25
Oversize 2	50

3

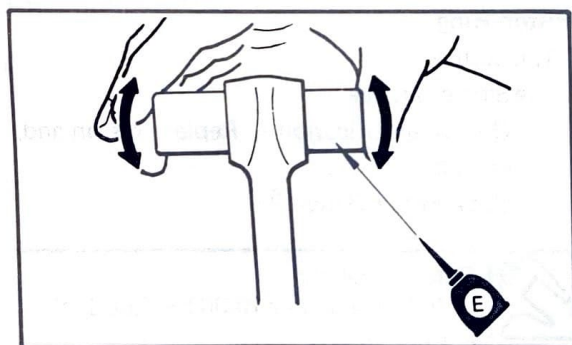
Piston Pin and Bearing

1. Lubricate:

- Piston Pin (lightly)

2. Install:

- Small end bearing
- Piston pin
(Into the small end of connecting rod)

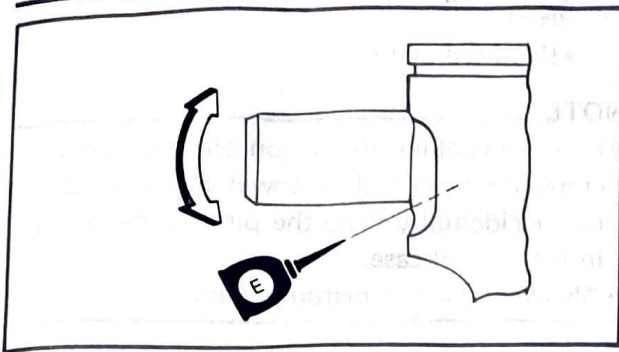


3. Check:

- Free play
There should be no noticeable free play.
Free play exists → Inspect the connecting rod for wear/Replace the pin and/or connecting rod as required.

4. Install:

- Piston Pin
(Into the piston pin hole).



5. Check:

- Free play (when the piston pin is in place in the piston)
There should be no noticeable free play.
Free play exists → Replace piston pin and/or piston.

6. Inspect:

- Piston pin and bearing
Signs of heat discoloration → Replace.

3

INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Apply engine mixing oil to the piston, piston ring and the piston pin.

2. Install:

- Piston ring

NOTE:

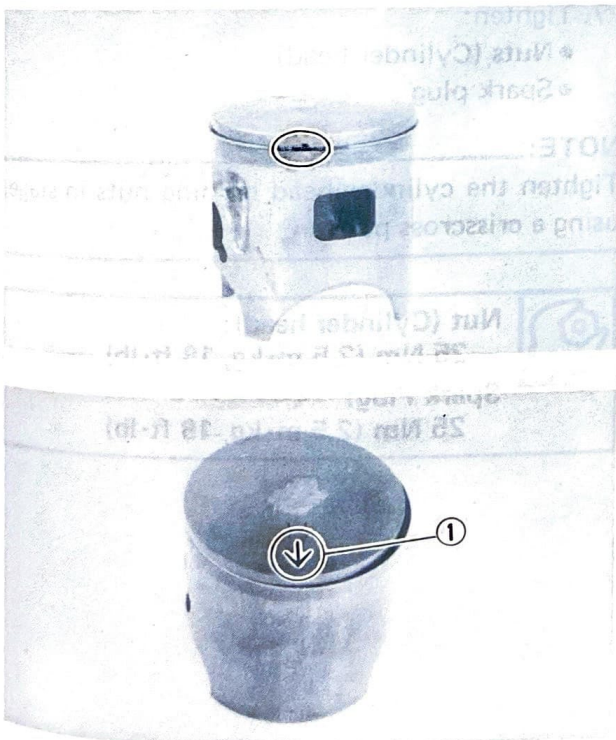
Meet the piston ring ends at the pin.

3. Install:

- Piston

NOTE:

The arrow ① on the piston must point to the front of the engine.



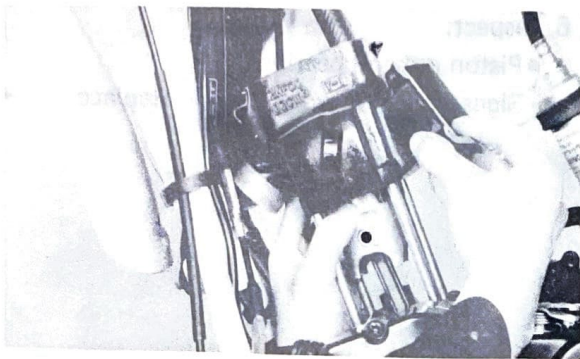


4. Install:

- Piston pin clip

NOTE:

- Before installing the piston pin clip, cover the crankcase with a clean towel or rag so you will not accidentally drop the pin clip and material into the crankcase.
- Always use a new piston pin clip.



5. Install:

- Gasket (Cylinder)
- Cylinder

NOTE:

- Always use a new gasket.
- Off set the piston ring ends.
- Install the cylinder with one hand while compressing the piston ring with the other hand.

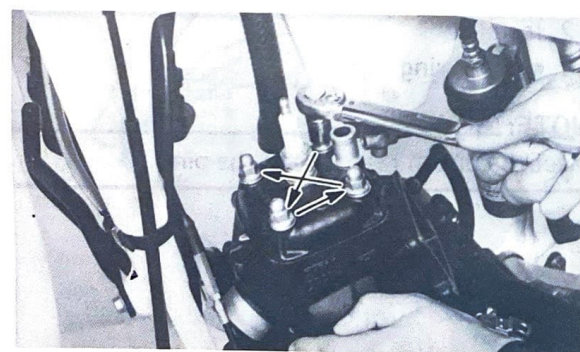


6. Install:

- Gasket (Cylinder head)

NOTE:

- Always use a new gasket.
- Install the gasket with the lobe ① forward.



7. Tighten:

- Nuts (Cylinder head)
- Spark plug

NOTE:

Tighten the cylinder head holding nuts in stage, using a crisscross pattern.



Nut (Cylinder head):
25 Nm (2.5 m·kg, 18 ft·lb)

Spark Plug:
25 Nm (2.5 m·kg, 18 ft·lb)



8. Adjust:

- Clutch cable free play

Refer to "CHAPTER 2. – CLUTCH ADJUSTMENT" section.



Clutch Cable Free Play:

2 ~ 3 mm (0.08 ~ 0.12 in)

9. Install:

- Reed valve
- Carburetor

Refer to "CARBURETOR AND REED VALVE – ASSEMBLY AND INSTALLATION" section.

10. Fill:

- Coolant

Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.

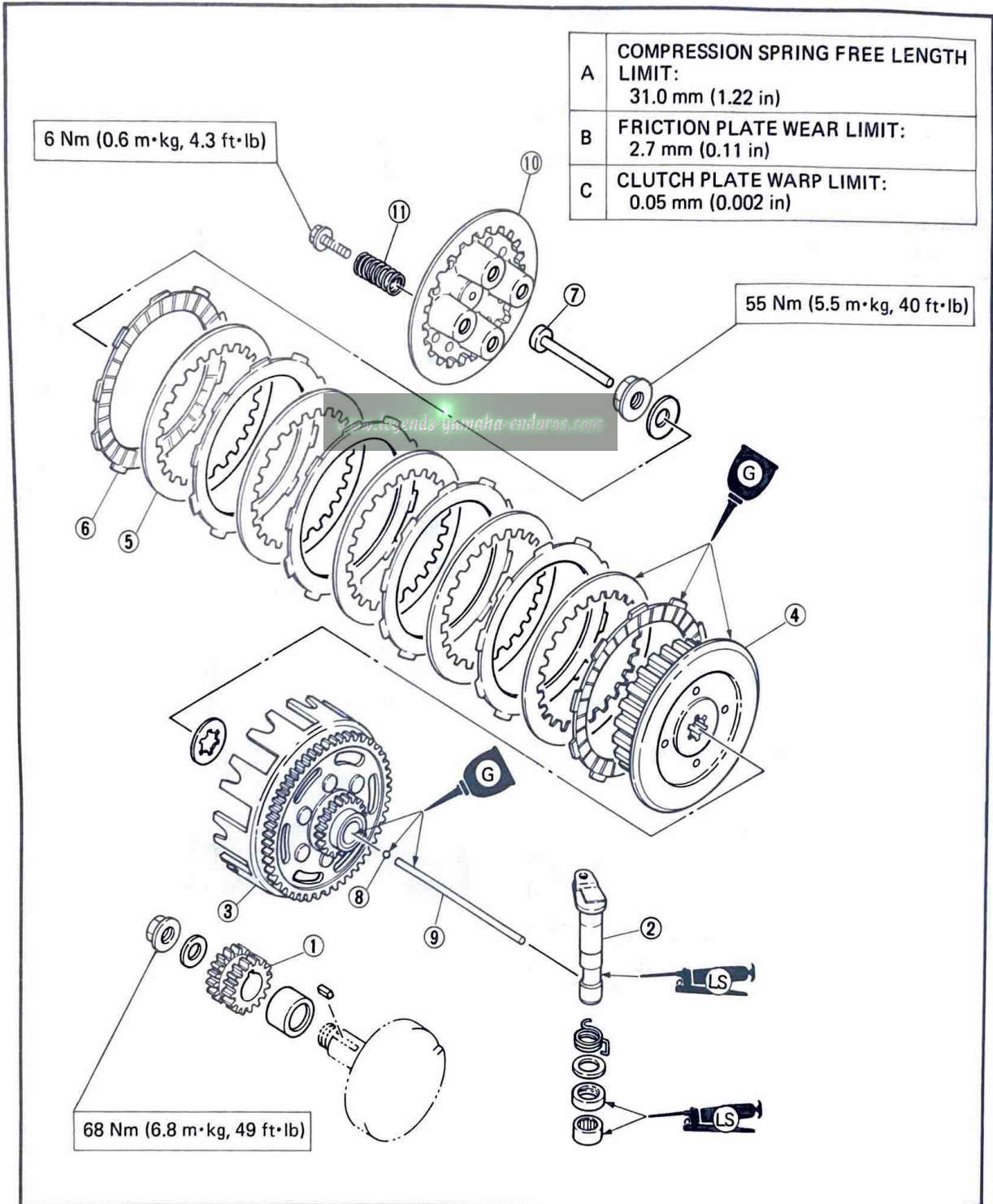
www.legends-yamaha-enduros.com



PRIMARY DRIVE GEAR, CLUTCH, KICK AXLE AND SHIFT SHAFT

- ① Primary drive gear
- ② Push lever axle
- ③ Clutch housing
- ④ Clutch boss
- ⑤ Clutch plate
- ⑥ Friction plate
- ⑦ Push rod #1
- ⑧ Ball
- ⑨ Push rod #2
- ⑩ Pressure plate
- ⑪ Compression spring

3



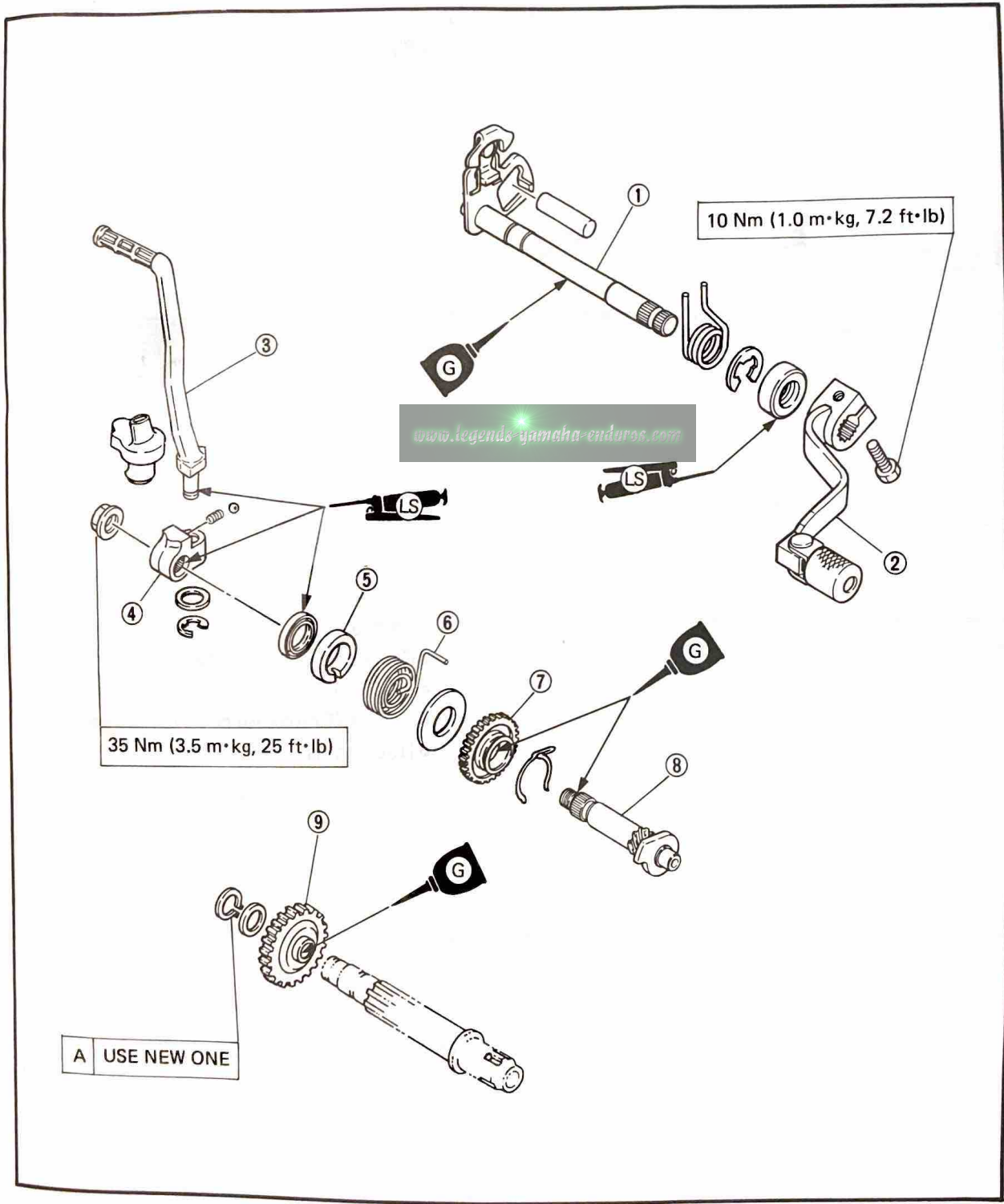
PRIMARY DRIVE GEAR, CLUTCH, KICK AXLE AND SHIFT SHAFT

ENG



- ① Shift shaft
- ② Change pedal
- ③ Kick crank
- ④ Kick crank boss
- ⑤ Spring guide
- ⑥ Return spring
- ⑦ Kick gear
- ⑧ Kick axle

- ⑨ Kick idle gear



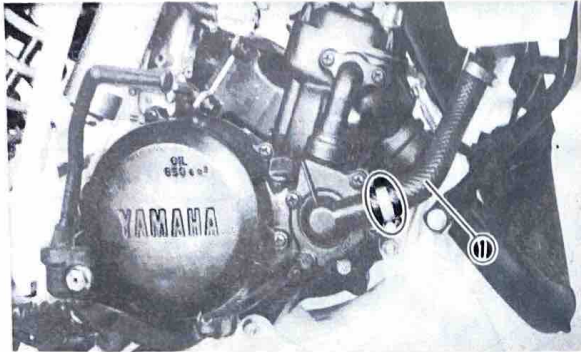
3



REMOVAL

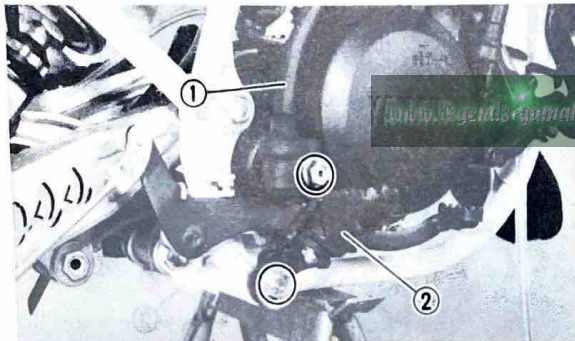
1. Drain:

- Coolant
Refer to "CHAPTER 2. – COOLANT REPLACEMENT" section.
- Transmission oil
Refer to "CHAPTER 2. – TRANSMISSION OIL REPLACEMENT" section.



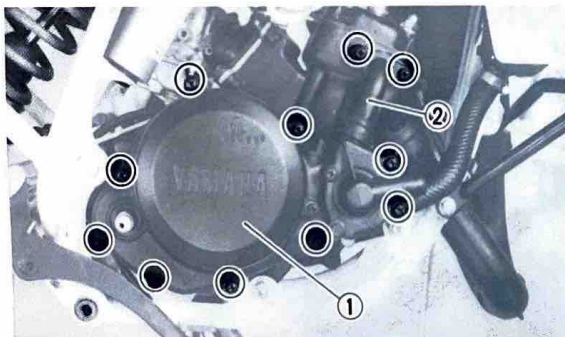
2. Remove:

- Pipe ①



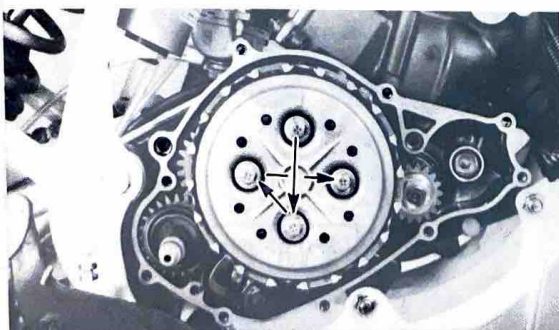
3. Remove:

- Kick crank ①
- Footrest ②



4. Remove:

- Crankcase cover (Right) ①
- Joint ②
- Gasket (Crankcase cover)
- Dowel pins



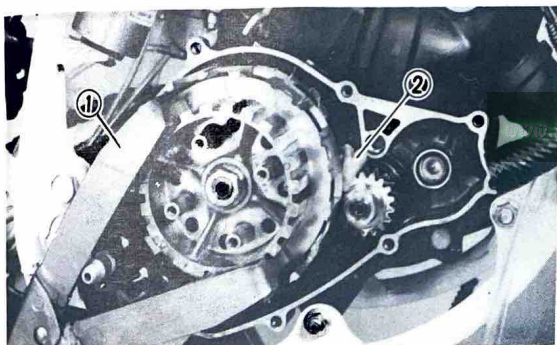
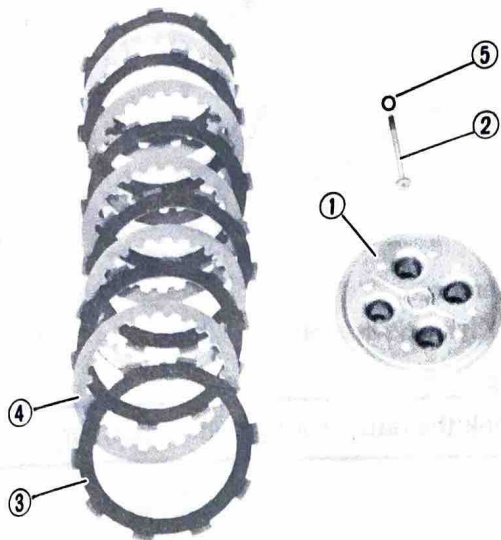
5. Remove:

- Screws (Pressure plate)
- Compression springs



6. Remove:

- Pressure plate ①
- Push rod # 1 ②
- Friction plates ③
- Clutch plates ④
- Ball ⑤

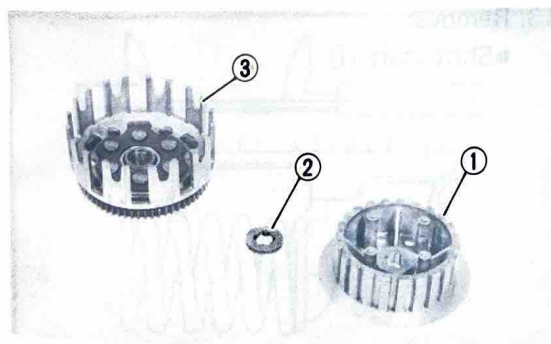


7. Remove:

- Nut (Clutch boss) ①
- Nut (Primary drive gear)

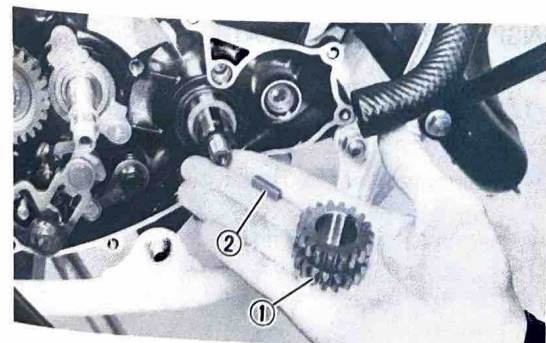
NOTE:

- Use the Universal Clutch Holder ① (YM-91042) to hold the clutch boss.
- Place a folded rag ② between the teeth of drive gear and driven gear to lock them.



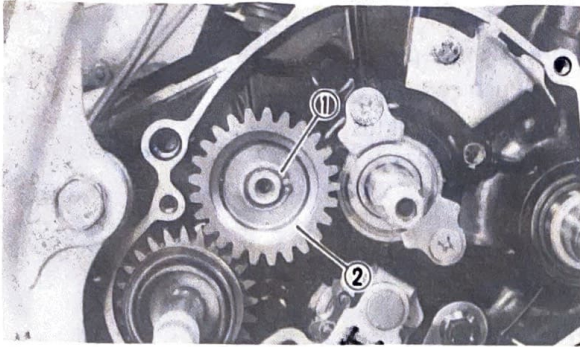
8. Remove:

- Clutch boss ①
- Thrust plate ②
- Clutch housing ③

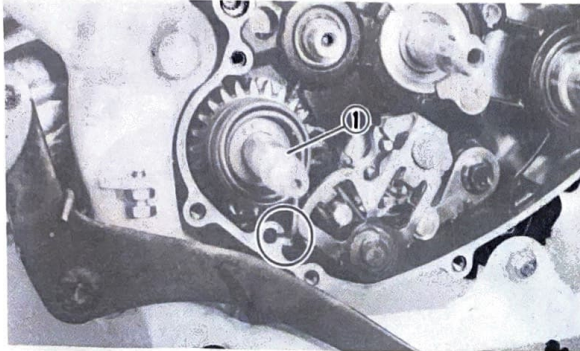


9. Remove:

- Primary drive gear ①
- Key ②

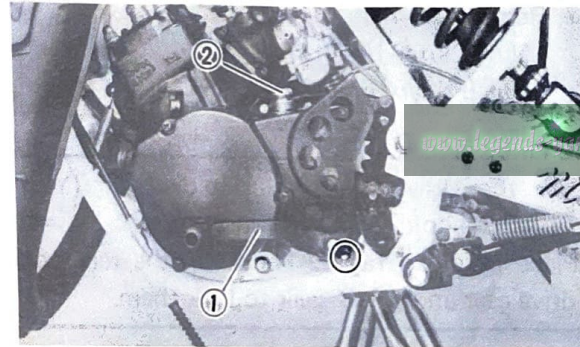


10. Remove:
- Circlip ①
 - Kick idle gear ②

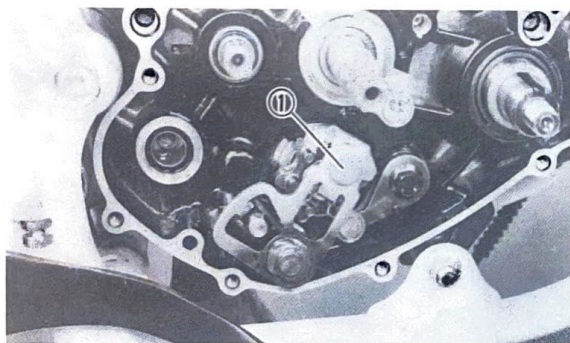


11. Remove:
- Kick axle assembly ①

NOTE: _____
 Unhook the return spring from its position.



12. Remove:
- Change pedal ①
 - Push lever ②

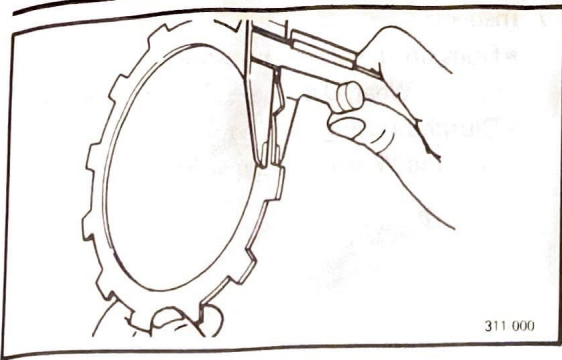


13. Remove:
- Shift shaft ①

INSPECTION AND REPAIR

Clutch

1. Inspect:
- Friction plate
 Damage/Wear → Replace friction plate as a set.



2. Measure:

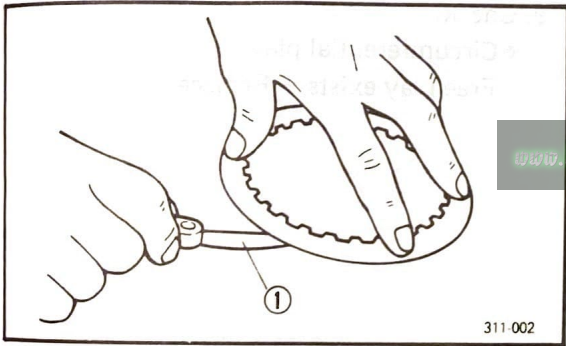
- Friction plate thickness
Out of specification → Replace friction plate as a set.
Measure at all four points.



Wear Limit: 2.7 mm (0.11 in)

3. Inspect:

- Clutch plate
Damage → Replace clutch plate as a set.

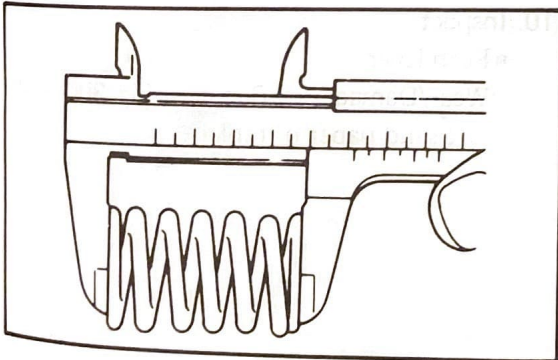


4. Measure:

- Clutch plate warpage
Out of specification → Replace clutch plate as a set.
Use a surface plate and feeler gauge ①.



Warp Limit: 0.05 mm (0.002 in)



5. Measure:

- Compression spring free length
Out of specification → Replace spring as a set.



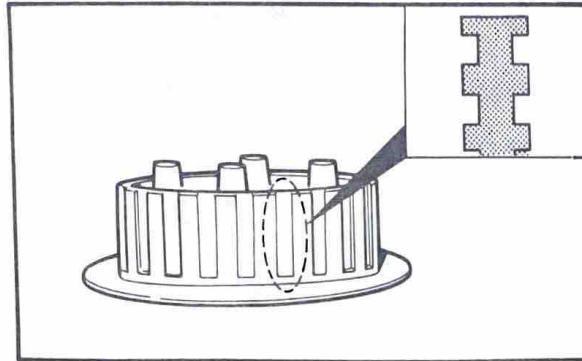
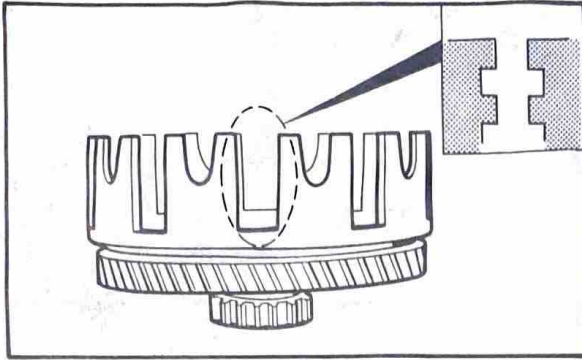
**Compression Spring Free Length
Limit:
31.0 mm (1.22 in)**

6. Inspect:

- Push rod #1
Roll the rod on a flat surface.
Bends → Replace.

WARNING:

Do not attempt to straighten a bent axle.



7. Inspect:

- Dogs on the clutch housing
Cracks/Wear/Damage → Deburr or replace.
- Clutch housing bearing
Chafing/Wear/Damage → Replace.

8. Inspect:

- Clutch boss splines
Scoring/Wear/Damage → Replace clutch boss.

NOTE:

Scoring on the clutch boss splines will cause erratic operation.

3



9. Check:

- Circumferential play
Free play exists → Replace.



10. Inspect:

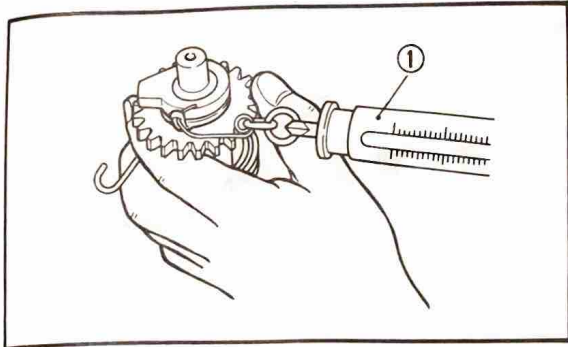
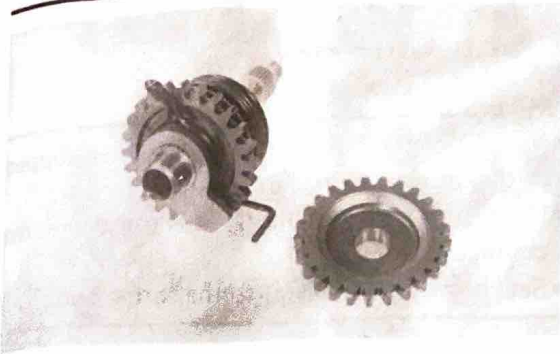
- Push lever
Wear/Damage → Repair using 300 ~ 400 grit sand paper or replace.



Primary Drive

1. Inspect:

- Drive gear and driven gear
Pitting/Wear/Damage → Replace.



Kick Starter

1. Inspect:

- Kick axle
- Kick gear
- Kick idle gear

Damage/Wear → Replace.

2. Measure:

- Kick spring tension
Out of specification → Replace.
Use a spring balance ①.

Standard Tension: 1.0 kg (2.2 lb)

CAUTION:

Do not try to bend the clip.

3

www.legends-yamaha-enduros.com



Shift Shaft

1. Inspect:

- Shift shaft

Damage/Bends/Wear → Replace.

INSTALLATION

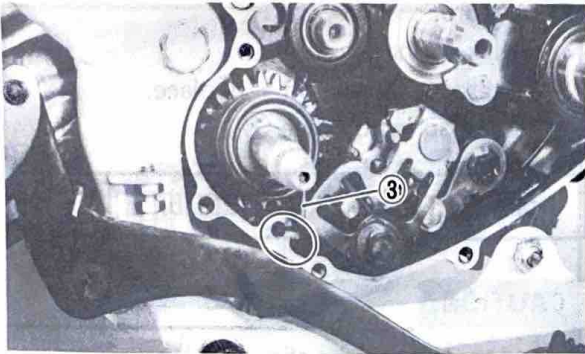
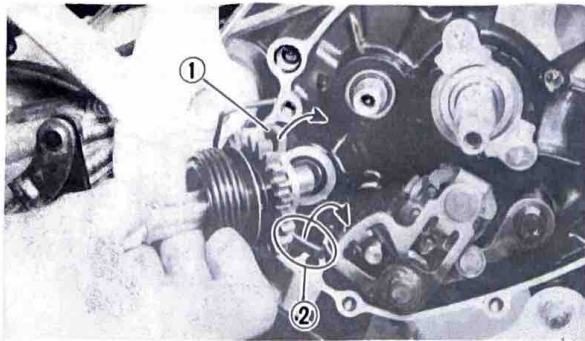
Reverse the "REMOVAL" procedure. Note the following points.

1. Tighten:

- Bolt (Change pedal):



**Bolt (Change pedal):
10 Nm (1.0 m·kg, 7.2 ft·lb)**



2. Install:

- Kick axle assembly.

NOTE:

- Make sure that the kick stopper ① is stopped at the projection of the crankcase.
- Make sure that the clip ② is engaged with the crankcase hole.
- Set the return spring ③ to the spring hook.



3. Install:

- Circlip (Kick idle gear)

NOTE:

www.legends-yamaha-en Always use a new circlip.

4. Install:

- Clutch housing

NOTE:

Apply gear oil to the bearing of the clutch housing.

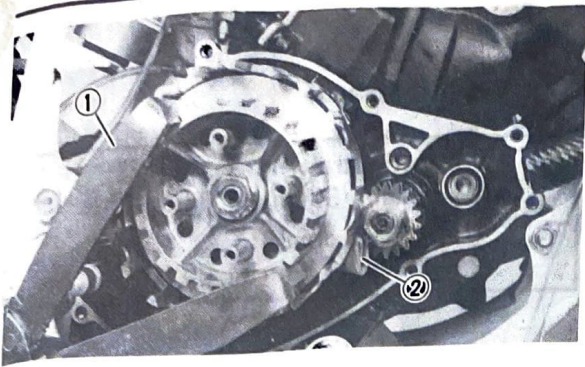
5. Tighten:

- Nut (Primary drive gear)
- Nut (Clutch boss)



Nut (Primary drive gear):
68 Nm (6.8 m·kg, 49 ft·lb)

Nut (Clutch boss):
55 Nm (5.5 m·kg, 40 ft·lb)

**NOTE:**

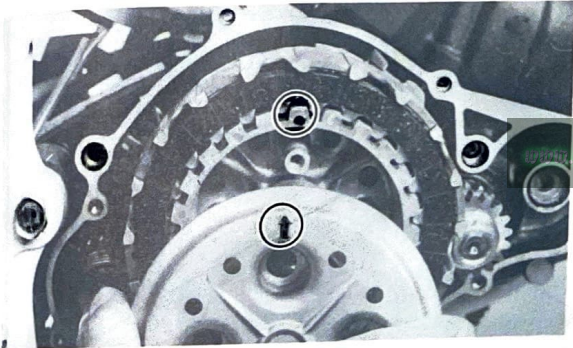
- Use the Universal Clutch Holder ① (YM-91042) to hold the clutch boss.
- Place a folded rag ② between the teeth of drive gear and driven gear to lock them.

6. Install:

- Clutch plates
- Friction plates

NOTE:

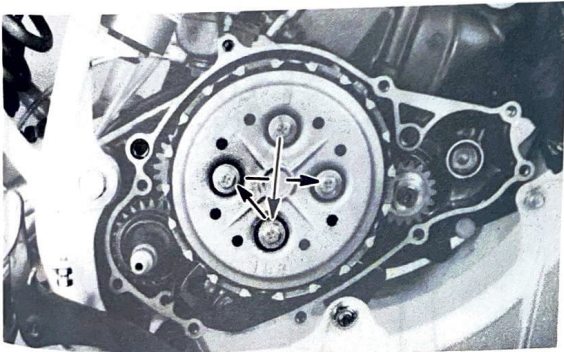
Apply gear oil to clutch plates and friction plates.

**7. Install:**

- Pressure plate

NOTE:

Align the punched mark on the clutch boss with the arrow mark on the pressure plate.

**8. Tighten:**

- Bolts (Pressure plate)



Bolts (Pressure plate):
6 Nm (0.6 m·kg, 4.3 ft·lb)

NOTE:

Tighten the bolts (pressure plate) in stage, using a crisscross pattern.

9. Install:

- Gasket (Crankcase cover)

NOTE:

Always use a new gasket.

**10. Tighten:**

- Bolt (Footrest)
- Bolt (Kick crank)



Bolt (Footrest):
50 Nm (5.0 m·kg, 36 ft·lb)

Bolt (Kick crank):
35 Nm (3.5 m·kg, 25 ft·lb)

11. Fill:

- Transmission oil
- Coolant

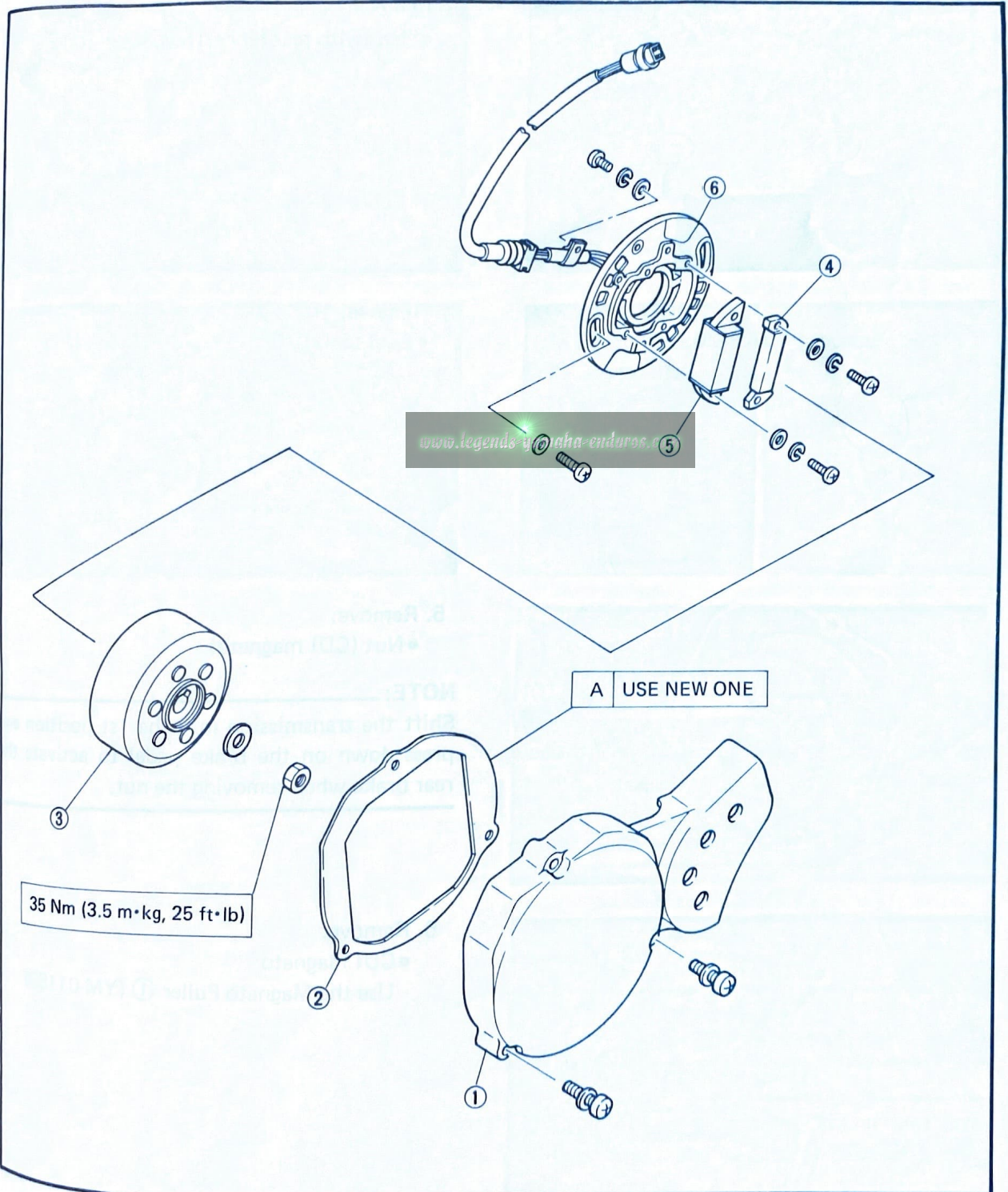
Refer to "CHAPTER 1. – FUEL, OIL,
AND COOLANT" section.

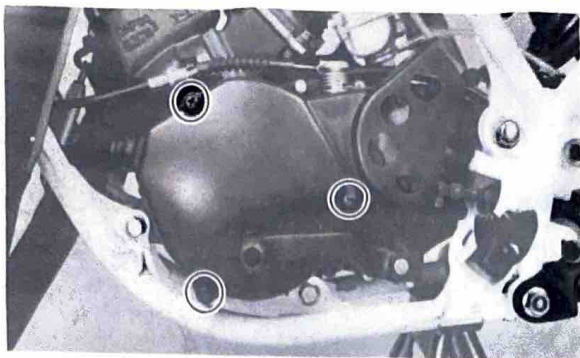


CDI MAGNETO

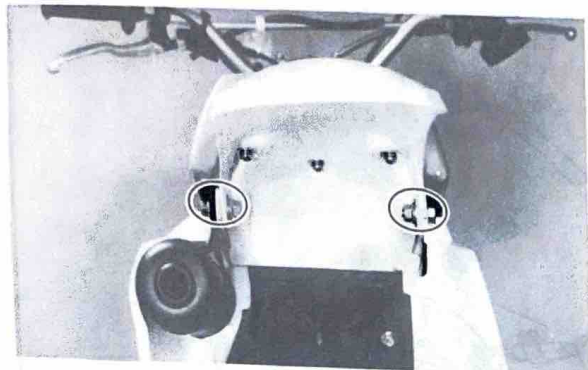
- ① Crankcase cover (Left)
- ② Gasket
- ③ CDI magneto
- ④ Pick-up coil
- ⑤ Charging coil
- ⑥ Stator

3

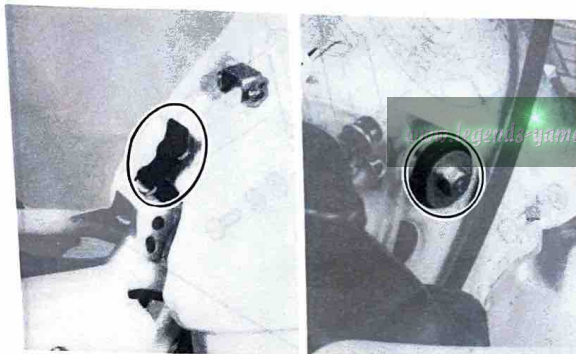


**REMOVAL**

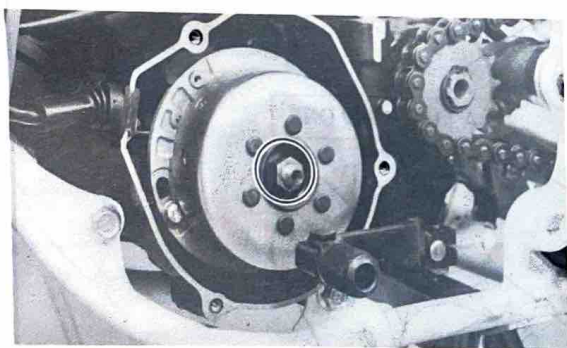
1. Remove:
 - Crankcase (Left)
2. Turn the fuel cock to the "OFF" position and disconnect the fuel hose.



3. Remove:
 - Seat (with rear fender)



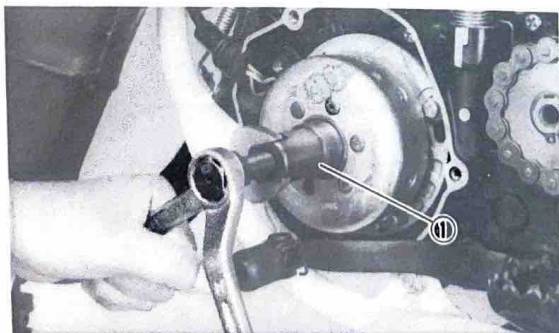
4. Remove:
 - Fuel tank



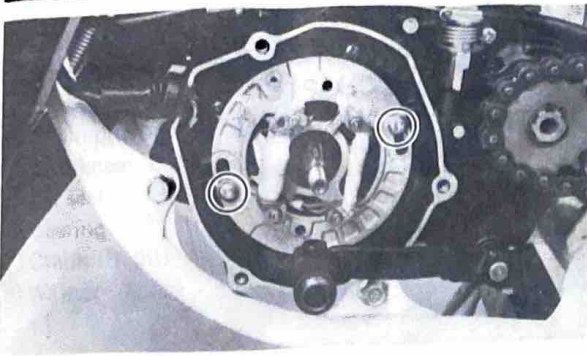
5. Remove:
 - Nut (CDI magneto)

NOTE:

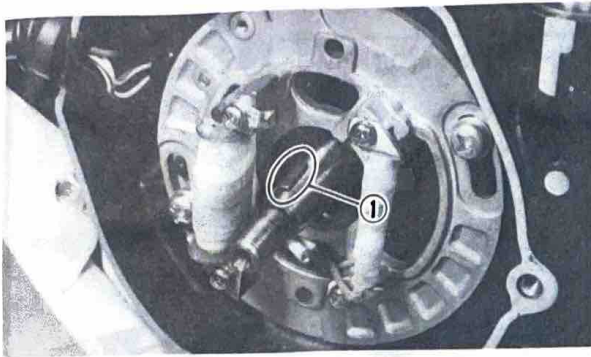
Shift the transmission into the 1st position and press down on the brake pedal to activate the rear brake when removing the nut.



6. Remove:
 - CDI magneto
 - Use the Magneto Puller ① (YM-01189)

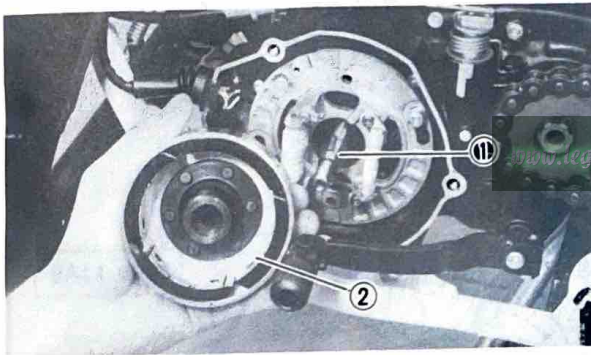


7. Remove:
- Stator assembly



INSPECTION AND REPAIR

1. Inspect:
- Key ①
Damage → Replace.



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Clean the tapered portions of the crankshaft ① and CDI magneto ② .

2. Install:
- CDI magneto

NOTE:

When installing the CDI magneto, make sure the woodruff key is properly seated in the key way of the crankshaft. Apply a light coating of lithium soap base grease to the tapered portion of the crankshaft end.

3. Tighten:
- Nut (CDI magneto):

	<p>Nut (CDI magneto): 35 Nm (3.5 m·kg, 25 ft·lb)</p>
--	--

NOTE:

Shift the transmission into the 1st and press down on the brake pedal to activate the rear brake when tightening the nut.



4. Check:

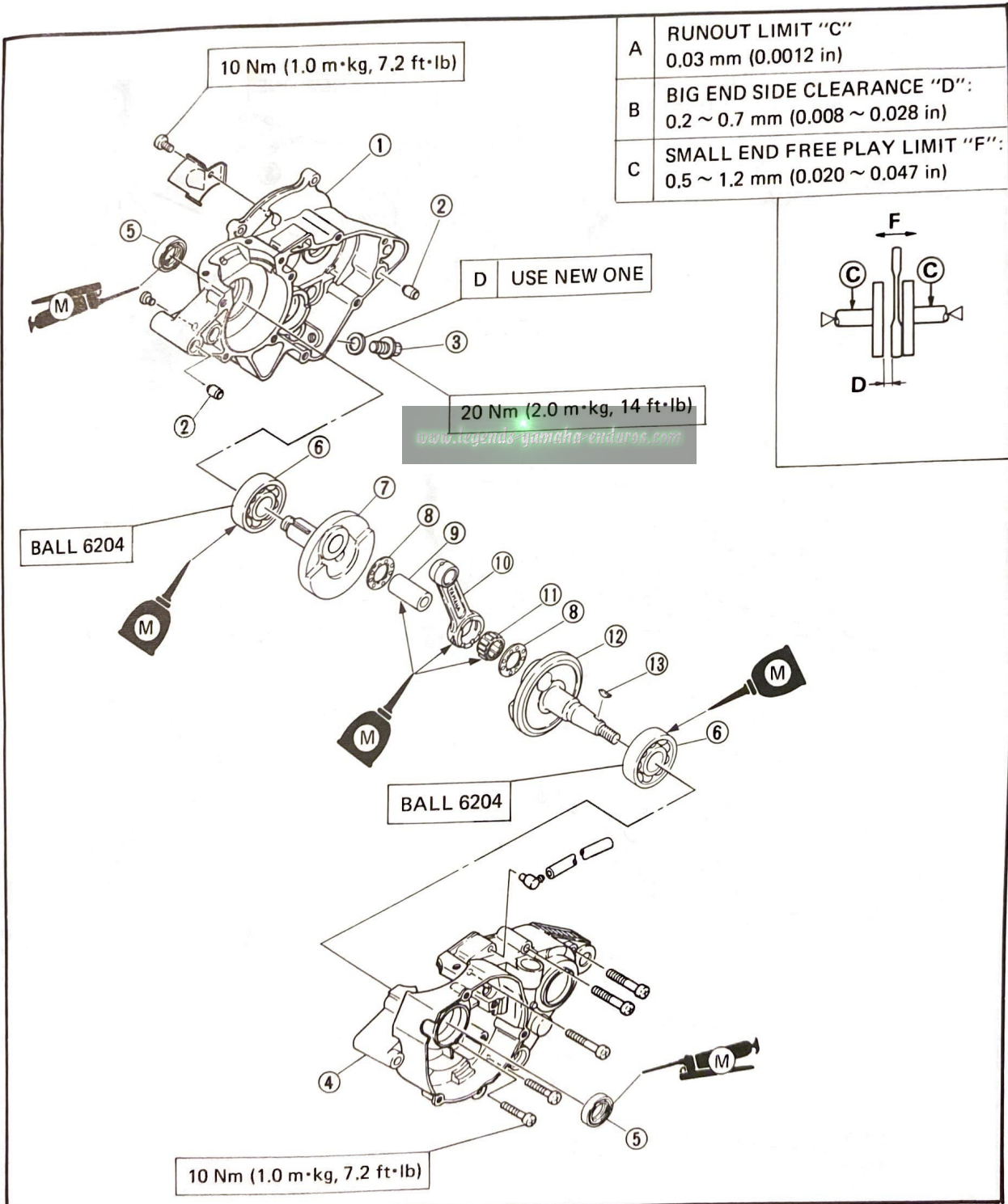
- Ignition timing

Refer to "CHAPTER 2. – IGNITION TIMING ADJUSTMENT" section.



CRANKSHAFT, TRANSMISSION AND SHIFTER

- ① Crankcase (Right)
- ② Dowel pin
- ③ Drain plug
- ④ Crankcase (Left)
- ⑤ Oil seal
- ⑥ Bearing
- ⑦ Crank (Right)
- ⑧ Washer
- ⑨ Crank pin
- ⑩ Connecting rod
- ⑪ Big end bearing
- ⑫ Crank (Left)
- ⑬ Wood ruff key



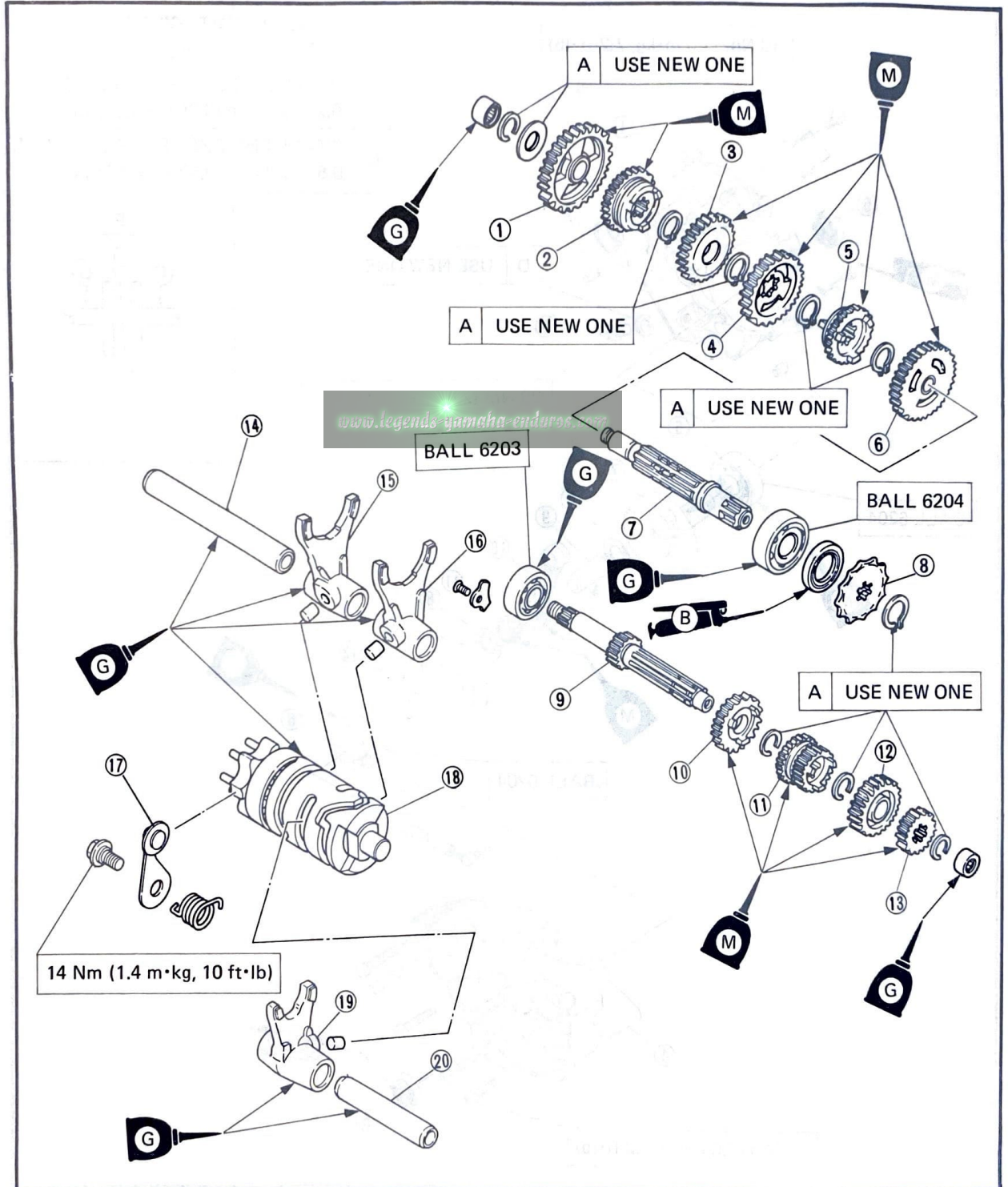
3



- ① 1st wheel gear
- ② 5th wheel gear
- ③ 4th wheel gear
- ④ 3rd wheel gear
- ⑤ 6th wheel gear
- ⑥ 2nd wheel gear
- ⑦ Drive axle

- ⑧ Drive sprocket
- ⑨ Main axle
- ⑩ 5th pinion gear
- ⑪ 3rd pinion gear
- ⑫ 6th pinion gear
- ⑬ 2nd pinion gear
- ⑭ Guide bar #1

- ⑮ Shift fork 3
- ⑯ Shift fork 1
- ⑰ Stopper lever
- ⑱ Shift cam
- ⑲ Shift fork 2
- ⑳ Guide bar #2





REMOVAL

1. Place the machine on a suitable stand under the frame.

WARNING:

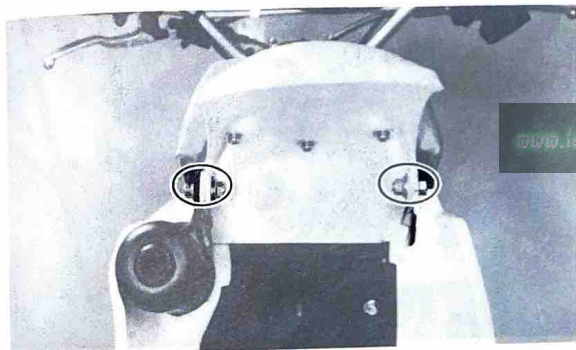
Securely support the machine so there is no danger of it falling over.

2. Drain:

- Coolant
Refer to "CHAPTER 2. – COOLANT REPLACEMENT" section.
- Transmission oil
Refer to "CHAPTER 2. – TRANSMISSION OIL REPLACEMENT" section.

3. Remove:

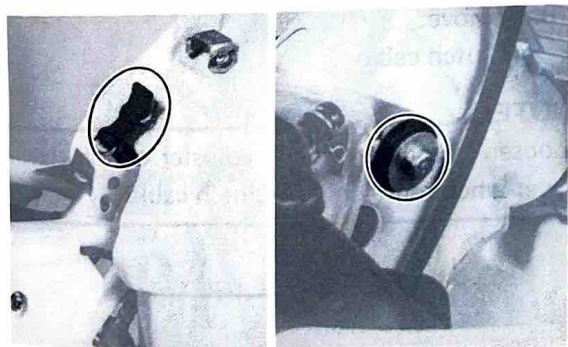
- Seat
- Rear fender



4. Turn the fuel cock to the "OFF" position and disconnect the fuel pipe.

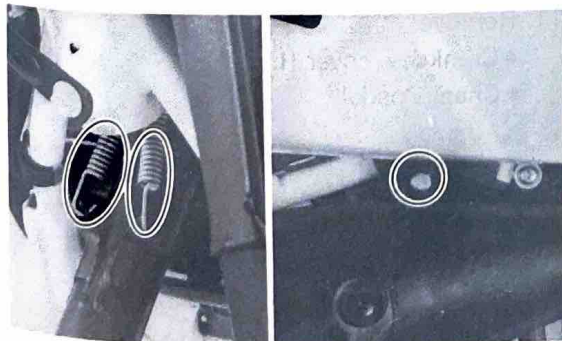
5. Remove:

- Fuel tank



6. Remove:

- Exhaust pipe

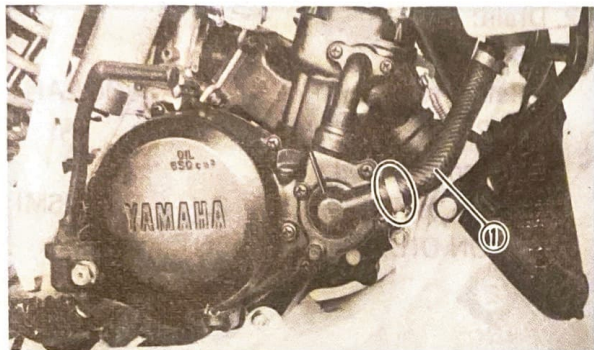




7. Remove:

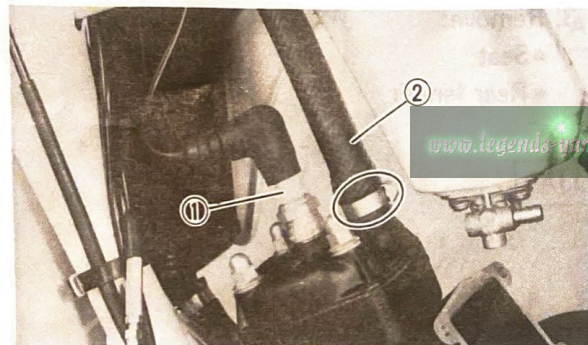
- Carburetor
- Reed valve

Refer to "CARBURETOR AND REED VALVE – REMOVAL" section.



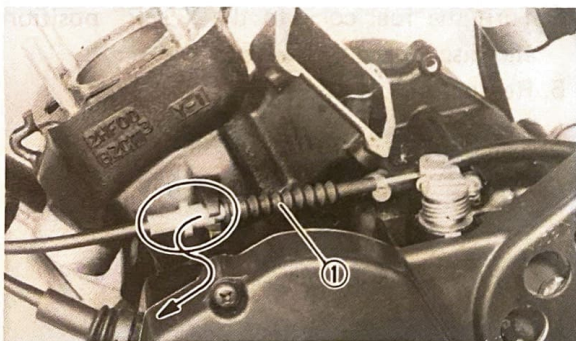
8. Remove:

- Pipe ①



9. Remove:

- Spark plug ①
- Hose ②

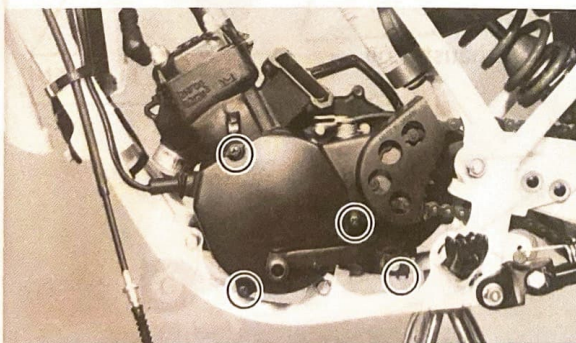


10. Remove:

- Clutch cable ①

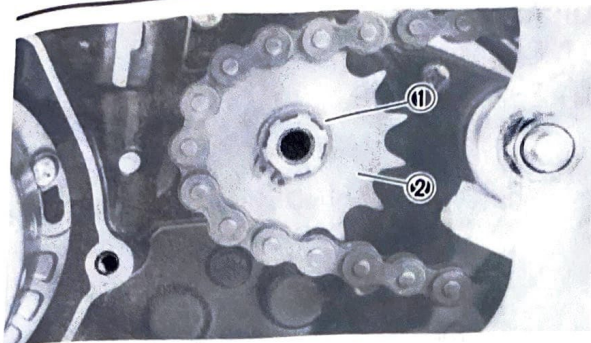
NOTE:

Loosen the clutch cable adjuster at the clutch lever when removing the clutch cable.

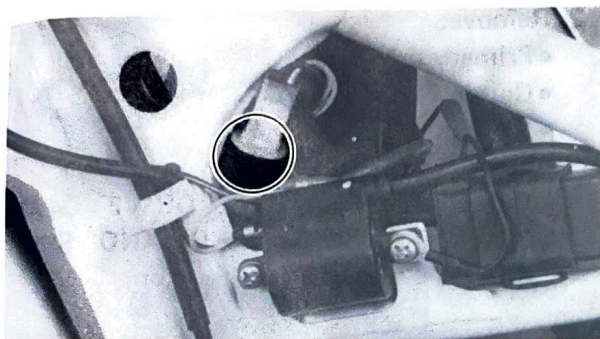


11. Remove:

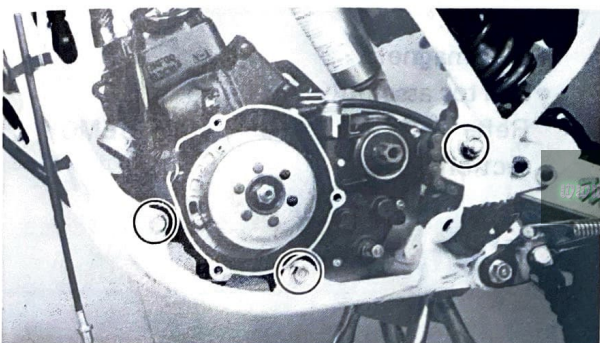
- Crankcase cover (Left)
- Change pedal



12. Remove:
- Circlip ①
 - Drive sprocket ②



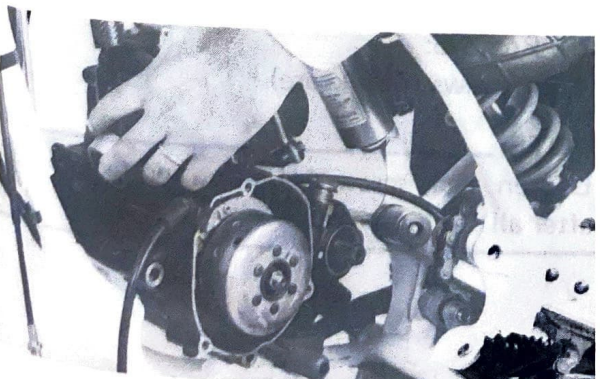
13. Disconnect:
- CDI magnet leads



14. Remove:
- Engine mounting bolts



NOTE: _____
 The engine and swingarm are installed using the same pivot shaft. Therefore, take care so that the pivot shaft is pulled, not entirely out, but a enough to set the engine free.



15. Remove:
- Engine



DISASSEMBLY

1. Remove:

- Cylinder head
- Cylinder
- Piston

Refer to "CYLINDER HEAD, CYLINDER AND PISTON – REMOVAL" section.

2. Remove:

- Primary drive gear
- Clutch
- Kick axle
- Shift shaft

Refer to "PRIMARY DRIVE GEAR, CLUTCH, KICK AXLE AND SHIFT SHAFT – REMOVAL" section.

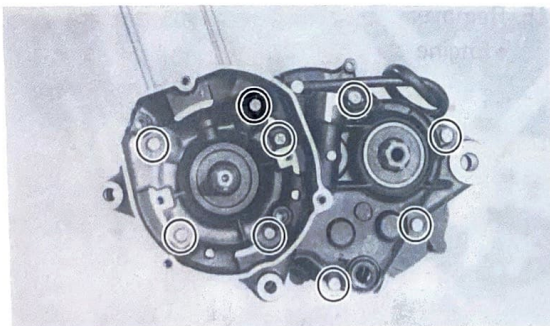
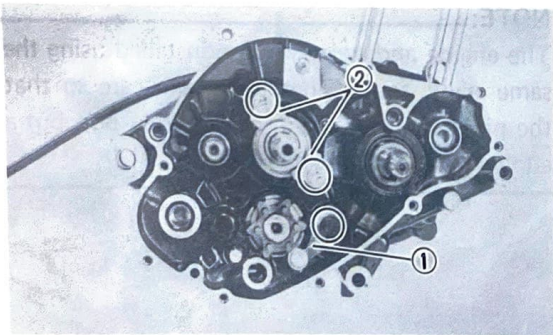
3. Remove:

- CDI magneto
- Starter assembly

Refer to "CDI MAGNETO – REMOVAL" section.

4. Remove:

- Stopper lever ①
- Bearing stoppers ②

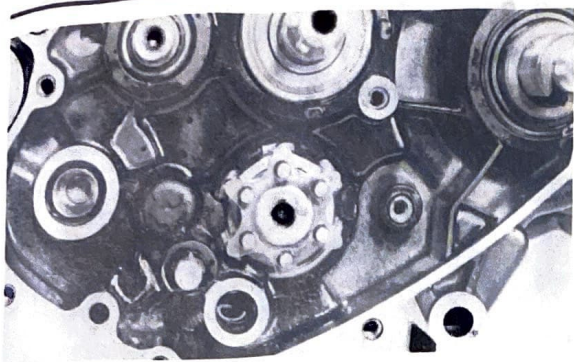


5. Remove:

- Screws (Crankcase)

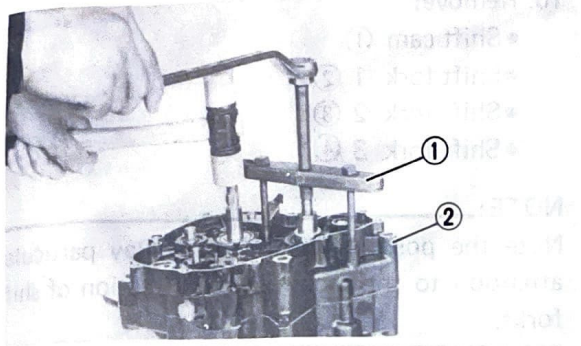
NOTE:

Loosen each screw 1/4 turn, and remove them after all are loosened.



NOTE:

Turn the shift cam to the position shown in the figure so that it does not contact the crankcase when separating the crankcase.



6. Attach:

Crankcase Separating Tool (YU-01135) ①

7. Remove:

•Crankcase (Right) ②

NOTE:

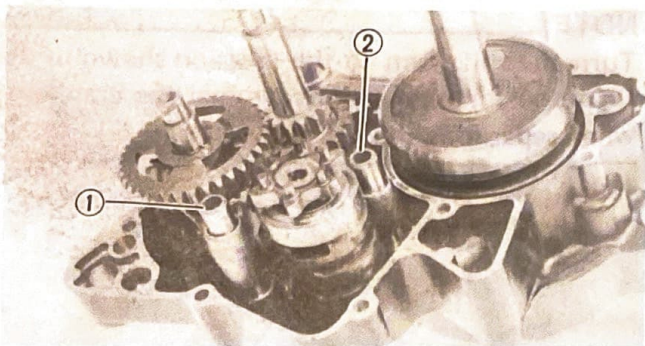
Fully tighten the tool holding bolts, but make sure the tool body is parallel with the case. If necessary, one screw may be backed out slightly to level the tool body.

www.legends-yamaha-enduros.com

8. As pressure is applied, alternately tap on the front engine mounting boss, transmission shafts, and shift cam.

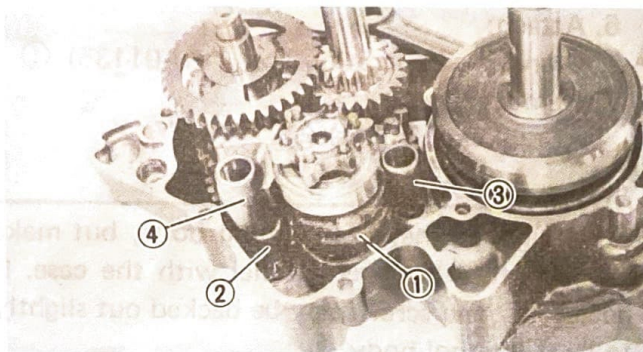
CAUTION:

Use a soft hammer to tap on the case half. Tap only on reinforced portions of case. Do not tap on gasket mating surface. Work slowly and carefully. Make sure the case halves separate evenly. If one end "hangs up," take pressure off the push screw, realign, and start over. If the cases do not separate, check for a remaining case screw or fitting. Do not force.



9. Remove:

- Guide bar # 1 ①
- Guide bar # 2 ②

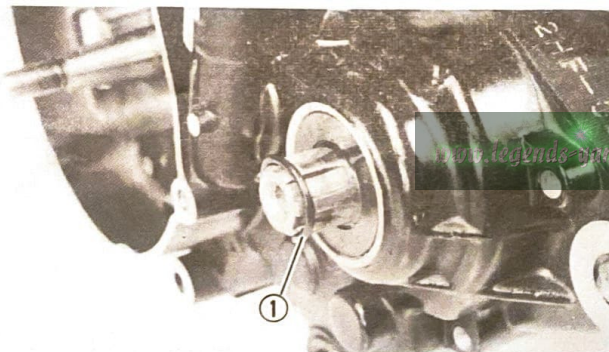


10. Remove:

- Shift cam ①
- Shift fork 1 ②
- Shift fork 2 ③
- Shift fork 3 ④

NOTE:

Note the position of each part. Pay particular attention to the location and direction of shift forks.

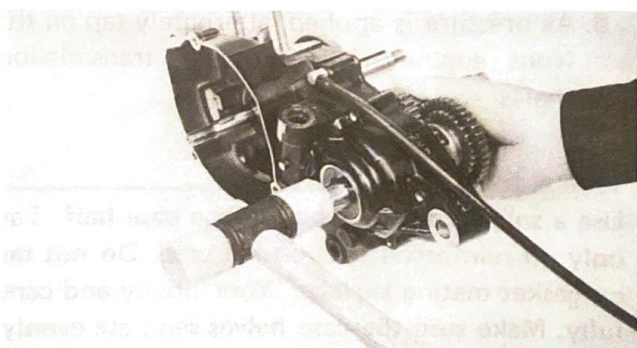


11. Install:

- O-ring ①

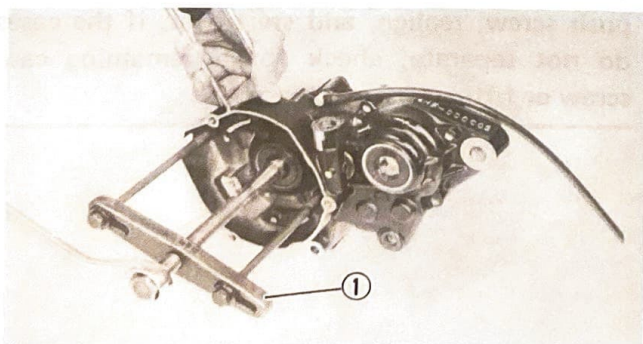
NOTE:

While removing the drive axle from the crankcase, pay careful attention to the oil seal lip. A recommended practice is to fit the O-ring and to apply grease over the fitted area.



12. Remove:

- Transmission assembly
- Tap lightly on the transmission drive shaft with a soft hammer.



13. Attach:

- Crankcase Separating Tool (YU-01135) ①

14. Remove:

- Crankshaft



INSPECTION AND REPAIR

Crankcase

1. Thoroughly wash the case halves in mild solvent.
2. Clean all the gasket mating surfaces and crankcase mating surfaces thoroughly.
3. Inspect:
 - Crankcase
Cracks/Damage → Replace.

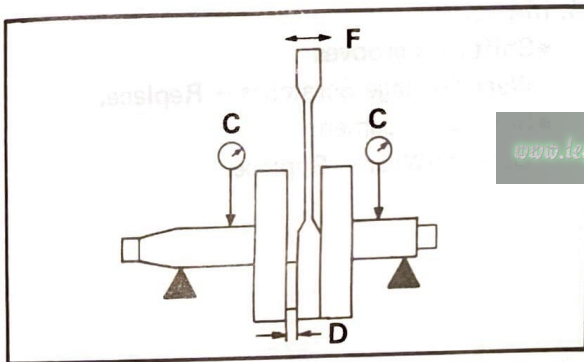
Bearings and Oil Seals

1. Inspect:
 - Bearings
Pitting/Damage → Replace.
 - Oil seal lips
Damage/Wear → Replace.

3

Crankshaft

1. Measure:
 - Runout limit "C"
 - Connecting rod big end side clearance "D"
 - Small end free play limit "F"
 Out of specification → Replace.
 Use a V-Blocks, the Dial Gauge (YU-03097) and a thickness gauge.



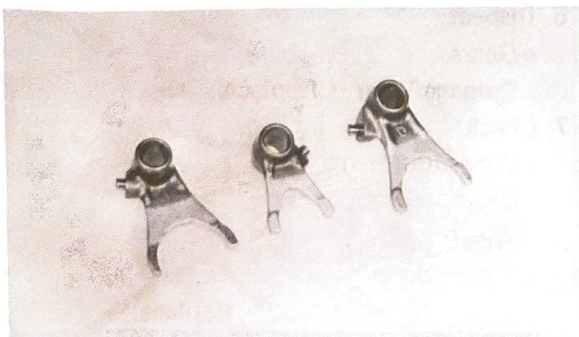
Runout Limit "C":
0.03 mm (0.0012 in)

Connecting Rod Big End Side Clearance "D":
0.2 ~ 0.7 mm (0.008 ~ 0.028 in)

Small End Free Play Limit "F":
0.5 ~ 1.2 mm (0.020 ~ 0.047 in)

Transmission and shifter

1. Inspect:
 - Shift forks (Gear and shift cam contact surfaces)
Wear/Chafing/Bends/Damage → Replace.



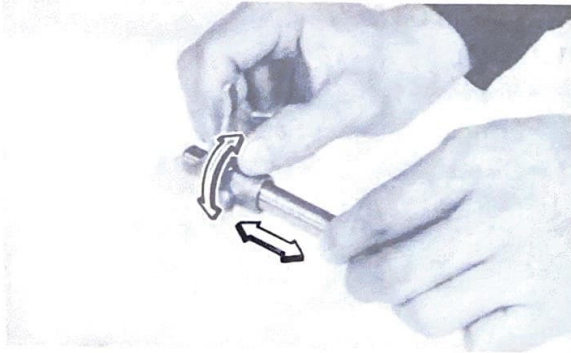


2. Inspect:

- Guide bars
 - Roll the guide bar on a flat surface.
 - Bends/Wear → Replace.

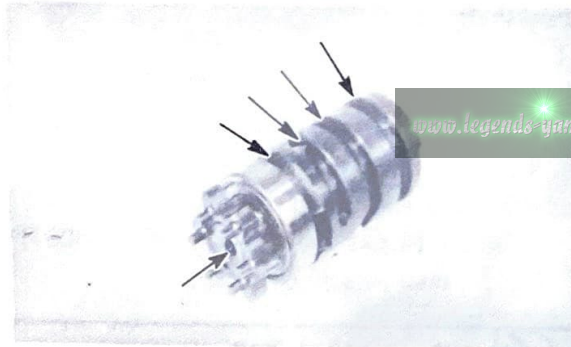
WARNING:

Do not attempt to straighten a bent guide bar.



3. Check:

- Shift fork movement
 - (on its guide bar)
 - Unsmooth operation → Replace.
 - Shift fork and/or guide bar.



4. Inspect:

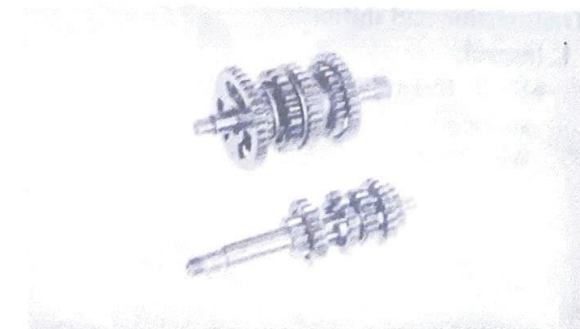
- Shift cam grooves
 - Wear/Damage/Scratches → Replace.
- Shift cam segment
 - Damage/Wear → Replace.

5. Measure:

- Axle runout
 - Out of specification → Replace.
 - Use a centering device and the Dial Gauge (YU-03097).



Runout Limit: 0.08 mm (0.0031 in)



6. Inspect:

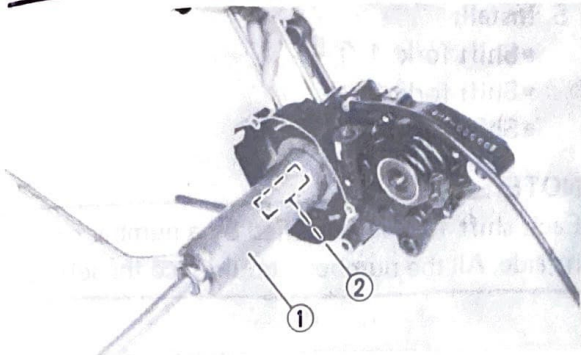
- Gears
 - Damage/Wear → Replace.

7. Check:

- Gear movement
 - Unsmooth operation → Replace.

8. Inspect:

- Mating dogs
 - Cracks/Wear/Damage → Replace.



ASSEMBLY

Reverse the "DISASSEMBLY" procedure. Note the following points.

1. Attach:

- Crankshaft Installing Tool (YU-90050 ①, YM-90063 ②)

2. Install:

- Crankshaft
To the crankcase (Left).

NOTE:

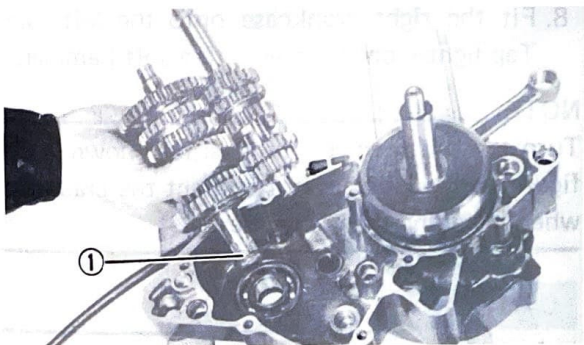
Hold the connecting rod at top dead center with one hand while turning the nut of the Installing Tool with the other. Operate the Installing Tool until the crankshaft bottoms against the bearing.

CAUTION:

To protect the crankshaft against scratches or to facilitate the operation of the installation.

Apply grease to the oil seal lips, and apply engine mixing oil to each hearing.

3



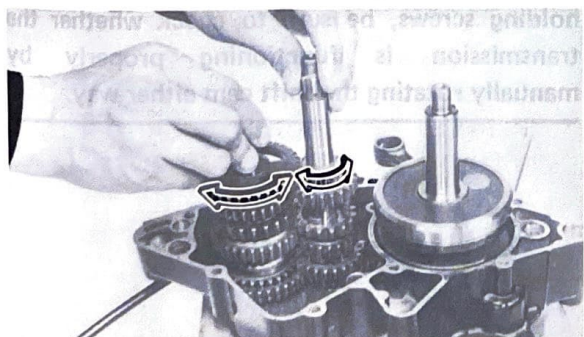
3. Install:

- Transmission assembly

NOTE:

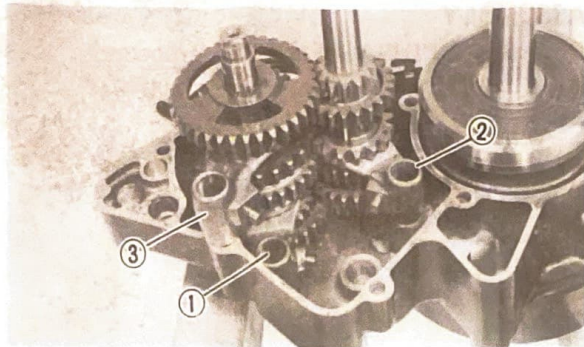
While installing the drive axle into the crankcase, pay careful attention to the oil seal lip.

A recommended practice is to fit the O-ring ① and apply grease over the fitted area.



4. Check:

- Transmission operation
Unsmooth operation → Repair.

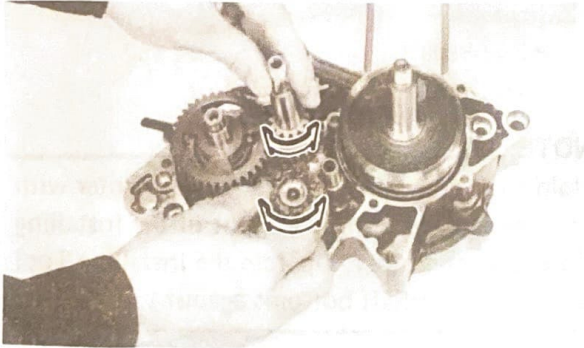


5. Install:

- Shift fork 1 ①
- Shift fork 2 ②
- Shift fork 3 ③

NOTE:

Each shift fork is identified by a number cast on its side. All the numbers should face the left side.



6. Check:

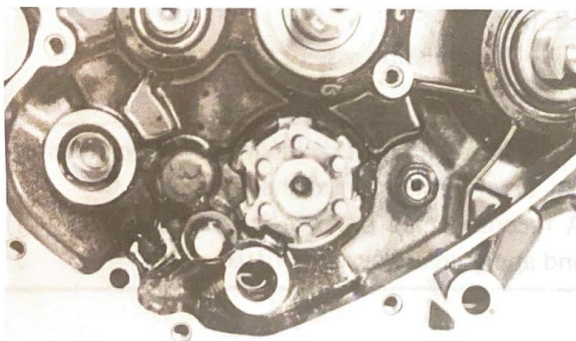
- Shifter operation
- Unsmooth operation → Repair.

3



7. Apply:

- Yamabond No. 4® (ACC-11001-30-00).
- To the mating surfaces of both case halves.



8. Fit the right crankcase onto the left case.
Tap lightly on the case with a soft hammer.

NOTE:

Turn the shift cam to the position shown in the figure so that it does not contact the crankcase when installing the crankcase.

CAUTION:

Before installing and torquing the crankcase holding screws, be sure to check whether the transmission is functioning properly by manually rotating the shift cam either way.



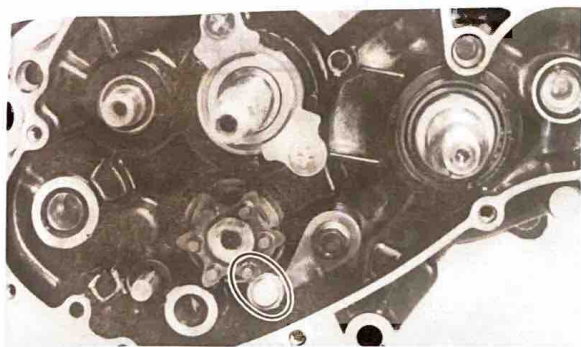
9. Tighten:
- Screws (Crankcase)



Screw (Crankcase):
10 Nm (1.0 m·kg, 7.2 ft·lb)

NOTE:

Tighten the screws in stage, using a crisscross pattern.



10. Set the stopper lever and torsion spring as properly in position.

11. Install:

- Stator assembly
- CDI magneto

Refer to "CDI MAGNETO – INSTALLATION" section.

www.legends-yamaha.com

12. Install:

- Shift shaft
- Kick axle
- Primary drive gear
- Clutch

Refer to "PRIMARY DRIVE GEAR, CLUTCH, KICK AXLE AND SHIFT SHAFT – INSTALLATION" section.

13. Install:

- Piston
- Cylinder
- Cylinder head

Refer to "CYLINDER HEAD, CYLINDER AND PISTON – INSTALLATION" section.



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Tighten:
 - Engine mounting bolts

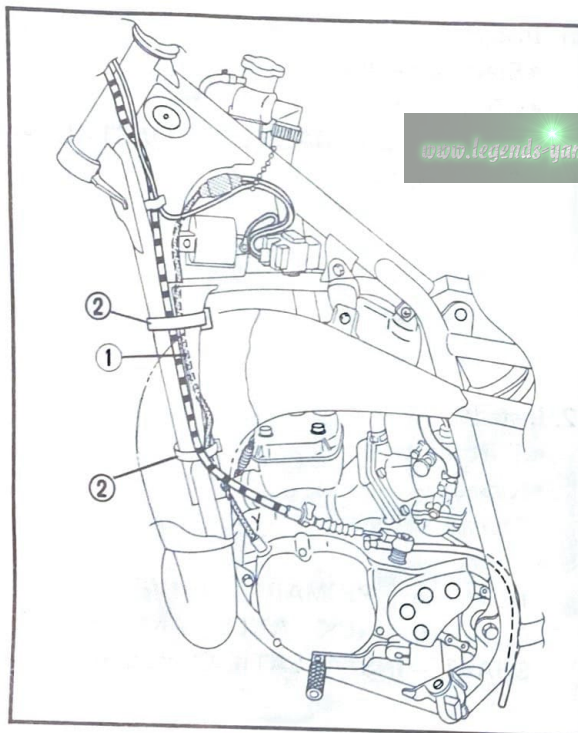


Engine mounting bolt (Upper):
40 Nm (4.0 m·kg, 29 ft·lb)

Engine mounting bolt (Lower):
40 Nm (4.0 m·kg, 29 ft·lb)

Pivot shaft:
53 Nm (5,3 m·kg, 38 ft·lb)

3



2. Connect:

- CDI magneto leads ①

NOTE:

Using a band ②, clamp the CDI magneto lead together with the clutch cable at the foot of the down tube. Then, pass the lead behind the radiator and connect it with CDI unit lead.

3. Install:

- Reed valve
- Carburetor

Refer to "CARBURETOR AND REED VALVE – ASSEMBLY AND INSTALLATION" section.



4. Tighten:
- Bolt (Exhaust pipe)



Bolt (Exhaust pipe):
10 Nm (1.0 m·kg, 7.2 ft·lb)

5. Fill:
- Coolant
 - Transmission oil
- Refer to "CHAPTER 1 – FUEL, OIL, AND COOLANT" section.

6. Adjust:
- Clutch cable free play
- Refer to "CHAPTER 2 – CLUTCH ADJUSTMENT" section.

www.legends-yamaha-enduro.com



Clutch cable free play:
2 ~ 3 mm (0.08 ~ 0.12 in)

7. Adjust:
- Drive chain slack
- Refer to "CHAPTER 2 – DRIVE CHAIN SLACK ADJUSTMENT" section.



Drive Chain Slack:
15 ~ 20 mm (0.6 ~ 0.8 in)

CHAPTER 4.

COOLING SYSTEM MAINTENANCE AND REPAIR

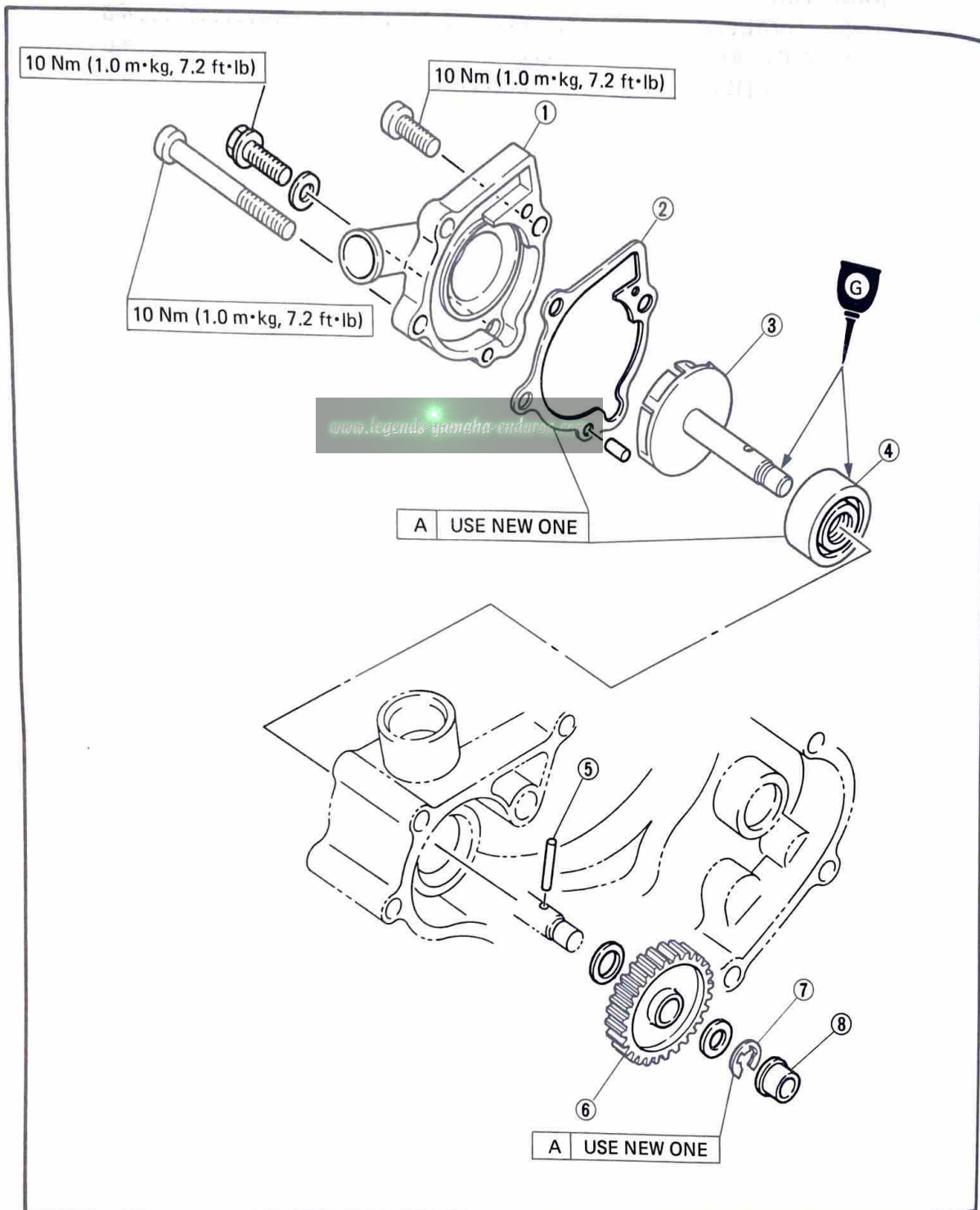
WATER PUMP	4-1
REMOVAL	4-2
INSPECTION	4-3
INSTALLATION	4-4
RADIATOR	4-5
REMOVAL	4-6
INSPECTION	4-6
INSTALLTION	4-7



COOLING SYSTEM MEINTENANCE AND REPAIR

WATER PUMP

- ① Water pump housing cover
- ② Gasket
- ③ Impeller shaft
- ④ Oil seal
- ⑤ Knock pin
- ⑥ Impeller shaft gear
- ⑦ Circlip
- ⑧ Solid bush



4

REMOVAL

NOTE:

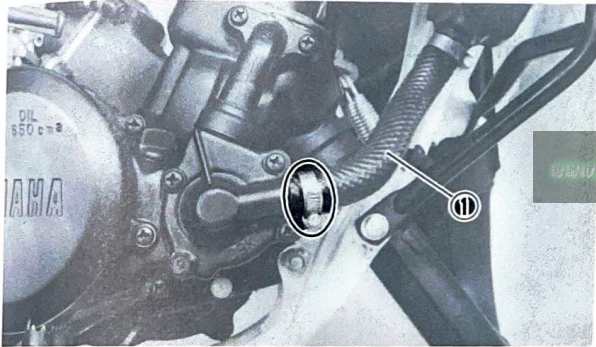
It is necessary to disassemble the water pump, unless there is no abnormality such as excessive change in coolant temperature and/or level, discoloration of coolant, or milky transmission oil.

1. Drain:

- Coolant
Refer to "CHAPTER 2. – COOLANT REPLACEMENT" section.
- Transmission oil
Refer to "CHAPTER 2. – TRANSMISSION OIL REPLACEMENT" section.

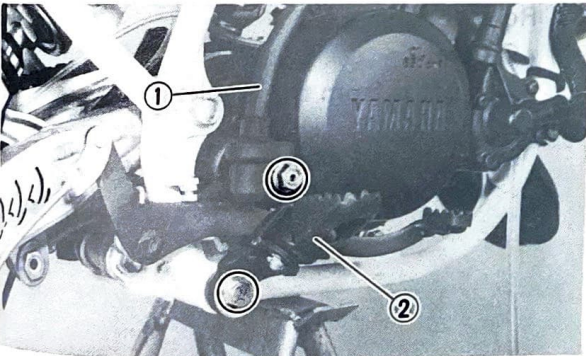
2. Remove:

- Pipe ①



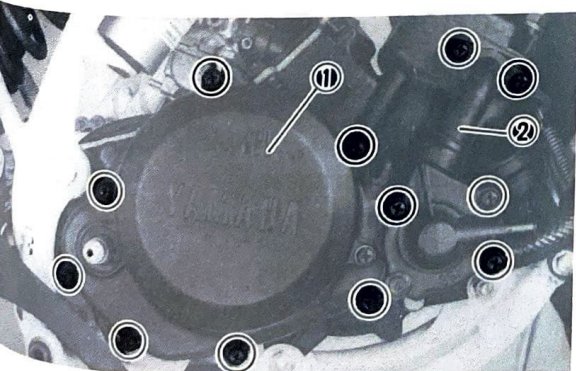
3. Remove:

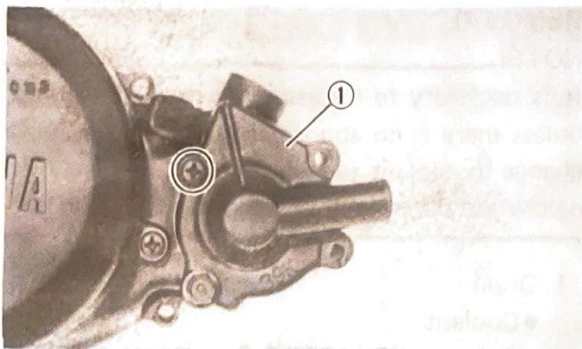
- Kick crank ①
- Footrest ②



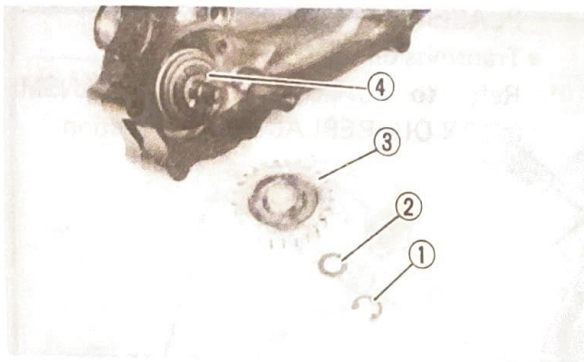
4. Remove:

- Crankcase cover ①
- Joint ②

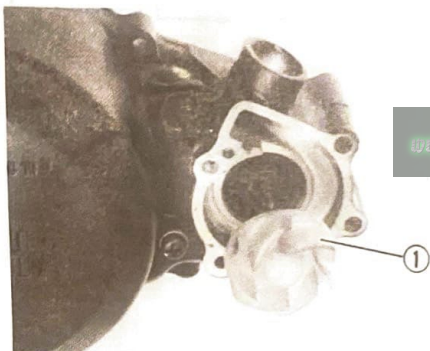




5. Remove:
- Water pump housing cover ①



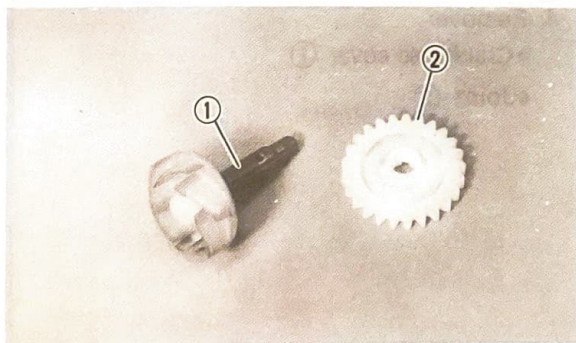
6. Remove:
- Circlip ①
 - Plain washer ②
 - Impeller shaft gear ③
 - Knock pin ④



7. Remove:
- Impeller shaft ①

4

8. Remove:
- Oil seal
- Top off it from the crankcase cover.



INSPECTION

1. Inspect:
- Impeller ①
Crank/Damage → Replace.
 - Impeller shaft gear ②
Wear/Damage → Replace.



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Install:
 - Oil seal

NOTE:

- Always use a new oil seal.
- Install the oil seal with the "WATER SIDE" mark ① is on the inside.
- Press-fit the oil seal until they contact the bottom.

2. Apply:

- Lightweight lithium base grease
Apply a grease to oil seal and impeller shaft.

3. Install:

- Impeller shaft
Install the shaft while turning it.

NOTE:

Take care so that the oil seal lip is not damaged or the spring does not slip off its position.

4. Install:

- Gasket (water pump housing cover)

NOTE:

Always use a new gasket.

5. Tighten:

- Bolt (Footrest)
- Bolt (Kick crank)



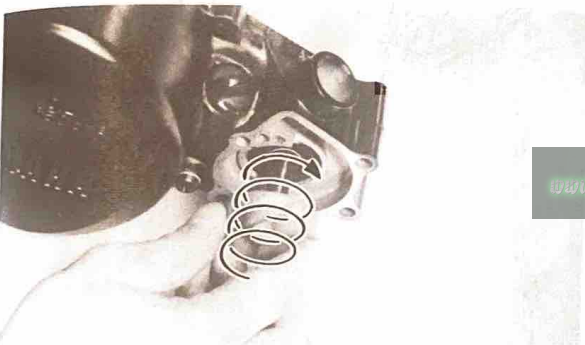
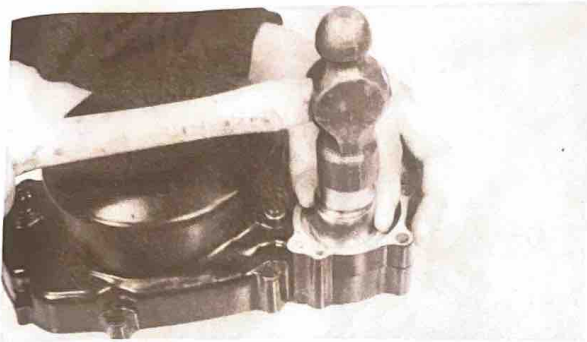
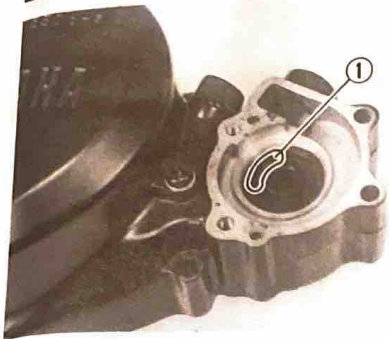
Bolt (Footrest):
50 Nm (5.0 m·kg, 36 ft·lb)

Bolt (Kick crank):
35 Nm (3.5 m·kg, 25 ft·lb)

6. Fill:

- Transmission oil
- Coolant

Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.



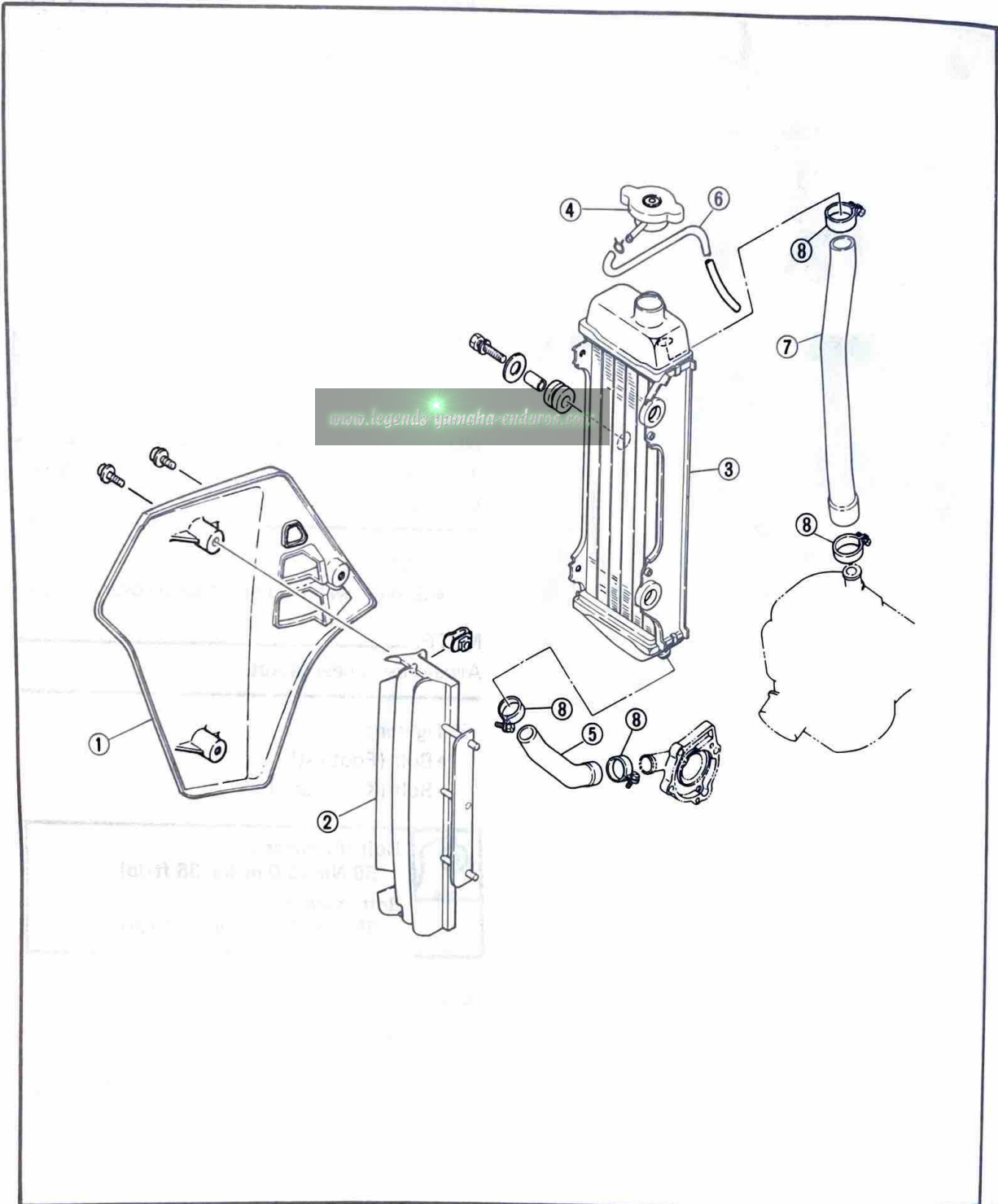


RADIATOR

RADIATOR

- ① Radiator cover
- ② Radiator panel
- ③ Radiator
- ④ Radiator cap
- ⑤ Hose
- ⑥ Breather pipe
- ⑦ Hose
- ⑧ Clamp

4



REMOVAL

1. Drain:

- Coolant
Refer to "CHAPTER 2. — COOLANT REPLACEMENT" section.

2. Remove:

- Radiator cover ①
- Radoator panel

3. Remove:

- Pipe ①
- Pipe ②
- Breather pipe ③

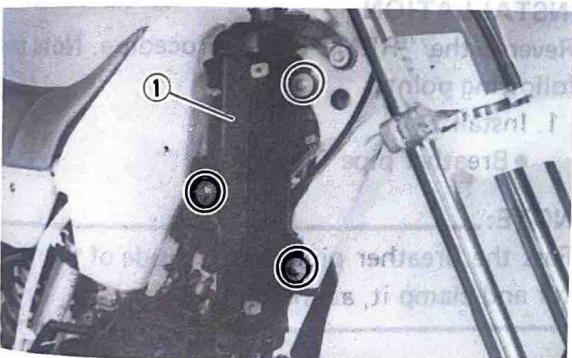
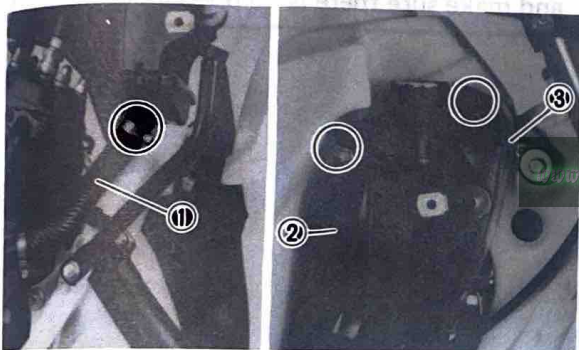
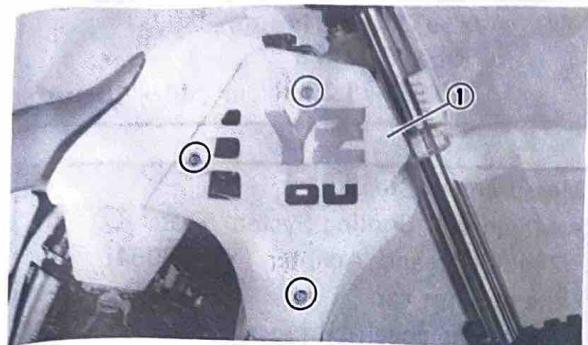
4. Remove:

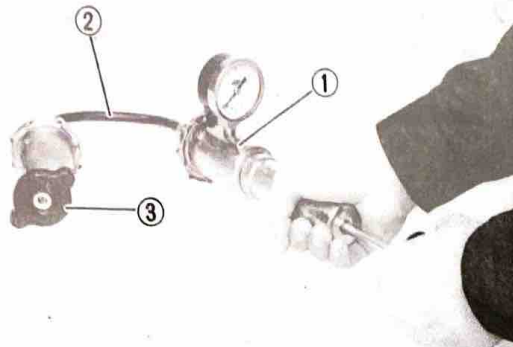
- Radiator ①

INSPECTION

1. Inspect:

- Radiator core
Obstruction → Blow out with compressed air through rear of the radiator.
Flattend fin → Repair/replace.





2. Inspect:

- Coolant hoses
Crank/Damage → Replace.

3. Measure:

- Valve opening pressure
Valve opens at pressure below the specified valve or defective → Replace.

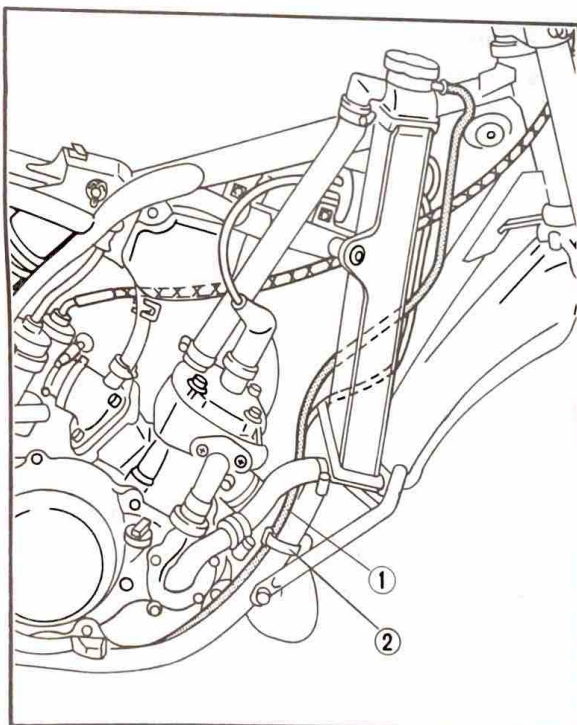
Valve Opening Pressure:

93 ~ 122 kPa

(0.95 ~ 1.25 kg/cm² , 14 ~ 18 psi)**Measurement Steps:**

- Attach the Cooling System Tester ① (YU-24460-01) and Adapter (YU-33984) ② to the radiator cap ③ .
- Apply the specified pressure for 10 seconds, and make sure there is no pressure drop.

4

www.legends-yamaha-enduros.com
**INSTALLATION**

Reverse the "REMOVAL" procedure. Note the following points.

1. Install:

- Breather pipe ①

NOTE:

Pass the breather pipe on the inside of the radiator and clamp it, as shown.

② Band



2. Fill:

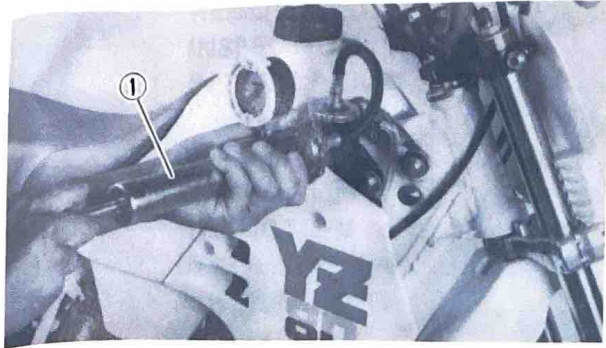
- Coolant

Refer to "CHAPTER 1. – FUEL, OIL AND COOLANT" section.

3. Inspect:

- Cooling system

Decrease of pressure (leaks) → Repair as required.

**Inspection Steps:**

- Attach the Cooling System Tester ① (YU-22460-01) to the radiator.
- Apply 108 kPa (1.1 kg/cm², 16 lb/in²) pressure
- Measure the indicated pressure with gauge.

CHAPTER 5.
CHASSIS MAINTENANCE AND REPAIR

FRONT WHEEL 5-1
 REMOVAL 5-2
 INSPECTION 5-2
 INSTALLATION 5-4

REAR WHEEL, REAR BRAKE AND DRIVE CHAIN 5-5
 REMOVAL 5-6
 INSPECTION 5-6
 INSTALLATION 5-9

FRONT BRAKE 5-11
 REMOVAL 5-12
 INSPECTION 5-14
 INSTALLATION 5-16
 AIR BLEEDING 5-19

FRONT FORK 5-21
 REMOVAL 5-22
 DISASSEMBLY 5-23
 INSPECTION 5-25
 ASSEMBLY 5-25
 INSTALLATION 5-27

STEERING HEAD 5-29
 REMOVAL 5-30
 INSPECTION 5-31
 INSTALLATION 5-32

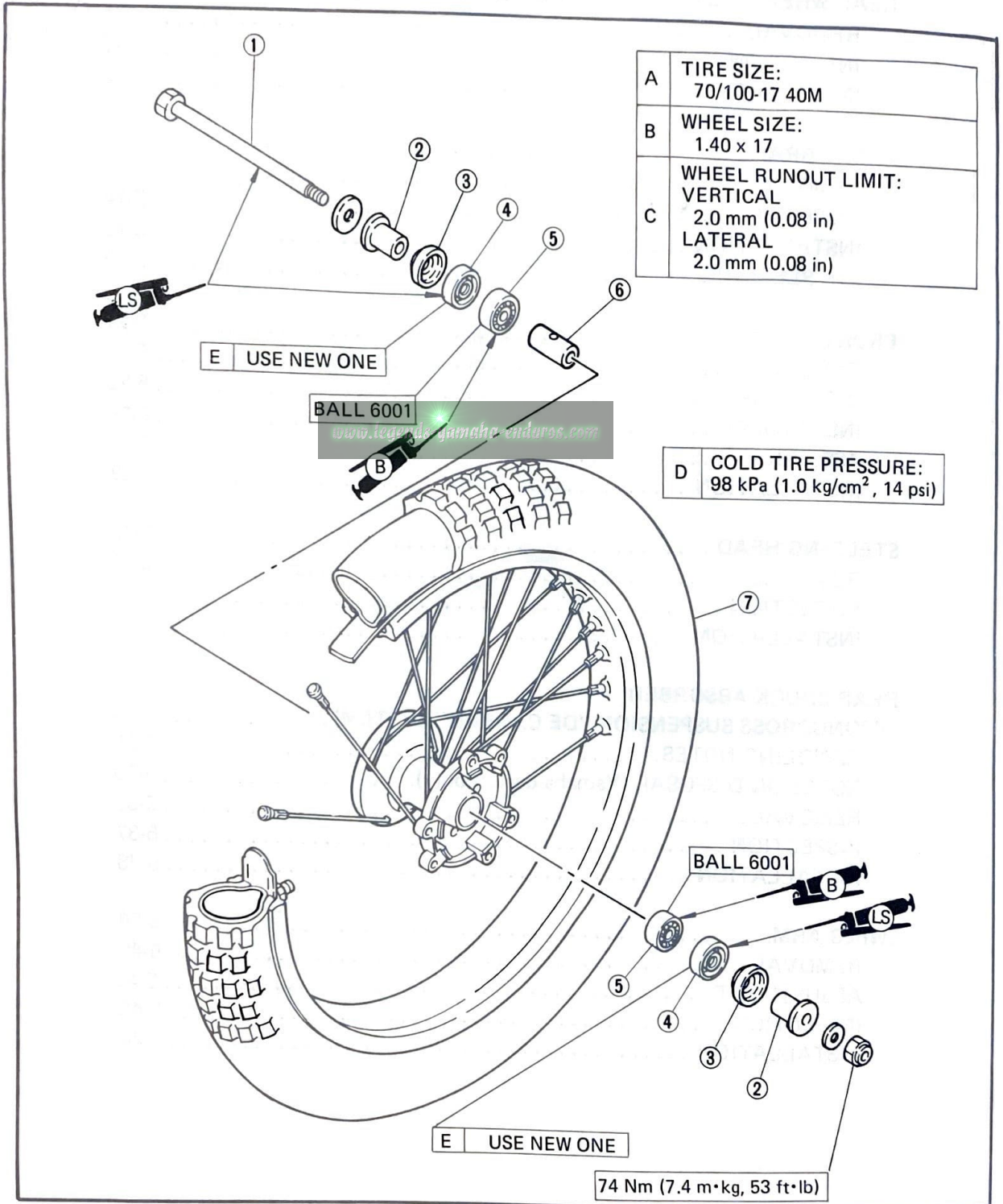
REAR SHOCK ABSORBER
(MONOCROSS SUSPENSION "DE CARBON" SYSTEM) 5-34
 HANDLING NOTES 5-35
 NOTES ON DISPOSAL (Yamaha dealers only) 5-35
 REMOVAL 5-36
 INSPECTION 5-37
 INSTALLATION 5-38

SWING ARM 5-39
 REMOVAL 5-40
 ADJUSTMENT 5-41
 INSPECTION 5-43
 INSTALLATION 5-44

CHASSIS MAINTENANCE AND REPAIR

FRONT WHEEL

- ① Wheel axle
- ② Collar
- ③ Dust cover
- ④ Dust seal
- ⑤ Bearing
- ⑥ Spacer
- ⑦ Wheel assembly



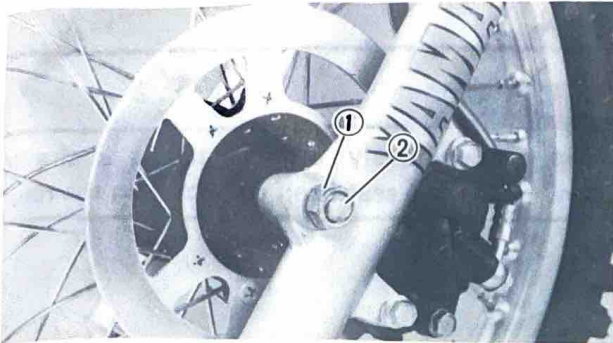
5

REMOVAL

1. Place a suitable stand under the engine.

WARNING:

Securely support the machine so there is no danger of it falling over.



2. Remove:

- Nut ①
- Wheel axle ②
- Wheel assembly

NOTE:

Do not depress the brake lever when the wheel is off the machine as the brake pads will be forced shut.

INSPECTION

1. Inspect:

- Front axle

Roll the axle on a flat surface.

Bends → Replace.

WARNING:

Do not attempt to straighten a bent axle.

2. Inspect:

- Wheel

Cracks/Bends/Warpage → Replace.

3. Measure:

- Wheel runout

Out of specification → Replace.

- ① Dial gauge

**Rim Runout Limit:**

Vertical: 2.0 mm (0.08 in)

Lateral: 2.0 mm (0.08 in)



4. Check:

- Wheel balance
Out of balance → Adjust.

NOTE:

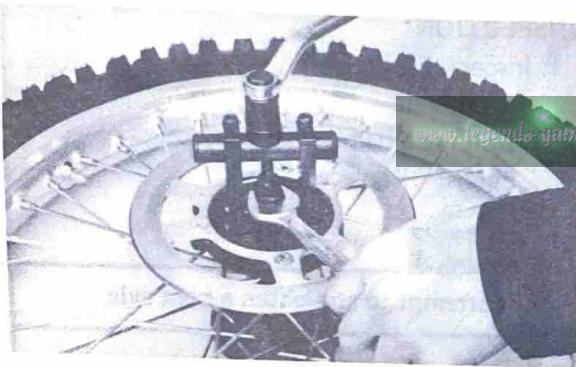
Balance wheels with the brake disc installed.

CAUTION:

Be sure the valve stem locknut is tightened securely after repairing or replacing a tire and/or wheel.

WARNING:

Ride conservatively after installing a tire to allow the tire to seat itself correctly on the rim.



5. Check:

- Wheel bearings
Bearings allow play in the wheel hub or wheel turns roughly → Replace.

Wheel bearing replacement steps:

- Clean the outside of the wheel hub.
- Remove the dust seal.
- Remove the bearing using a general bearing puller.
- Install the new bearing by reversing the previous steps.

NOTE:

Use a socket that matches the outside diameter of the race of the bearing.

CAUTION:

Do not strike the center race of balls of the bearing. Contact should be made only with the outer race.

- Install the dust seal.

INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Apply the lithium soap base grease to the dust seal lips and wheel axle.
2. Tighten:
 - Nut (Wheel axle)

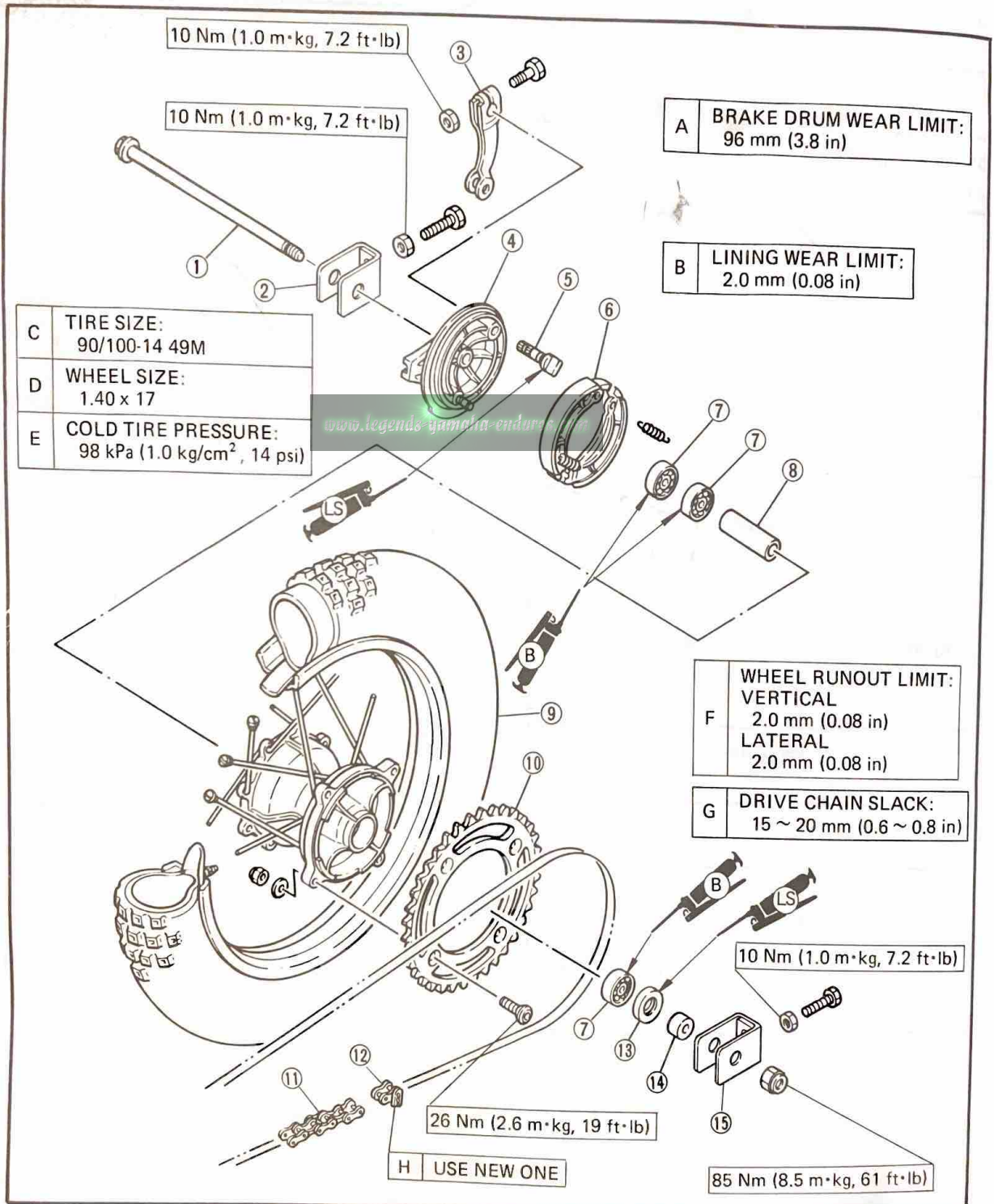


Nut (Wheel axle):
74 Nm (7.4 m·kg, 53 ft·lb)

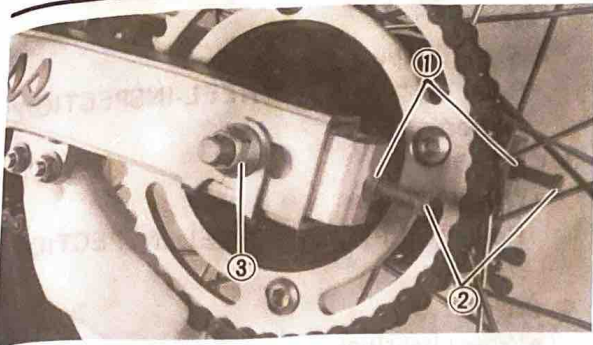
www.legends-yamaha-enduros.com

REAR WHEEL, REAR BRAKE AND DRIVE CHAIN

- ① Wheel axle
- ② Chain puller (Right)
- ③ Camshaft lever
- ④ Brake shoe plate
- ⑤ Camshaft
- ⑥ Brake shoes
- ⑦ Bearing
- ⑧ Spacer
- ⑨ Rear wheel assembly
- ⑩ Drive sprocket
- ⑪ Drive chain
- ⑫ Chain joint
- ⑬ Dust seal
- ⑭ Collar
- ⑮ Chain puller (Left)



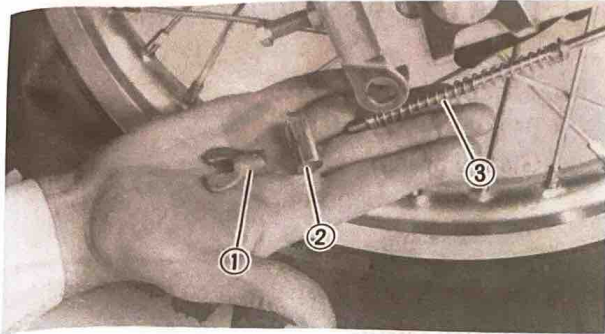
5



REMOVAL

1. Loosen:

- Lock nuts (Chain puller) ①
- Adjusters (Chain puller) ②
- Axle nut ③



2. Remove:

- Adjuster ①
- Pin ②
- Spring ③

3. Place a suitable stand under the engine.

WARNING:

Securely support the machine so there is no danger of it falling over.

4. Remove:

- Axle nut
- Wheel axle
- Drive chain ①

NOTE:

Before removing the drive chain push the wheel forward.

5. Remove:

- Rear wheel assembly

INSPECTION

1. Inspect:

- Rear axle
- Wheel

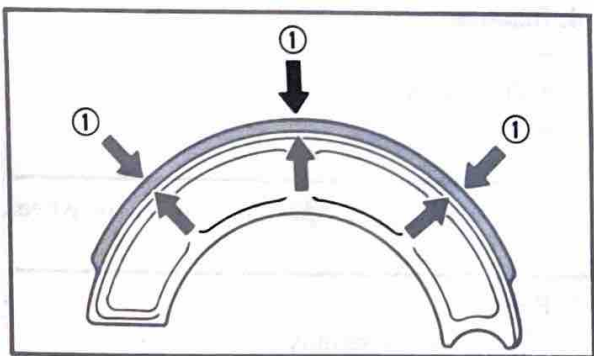
Refer to "FRONT WHEEL-INSPECTION" section.

2. Measure:
 - Wheel runout
Refer to "FRONT WHEEL-INSPECTION" section.
3. Check:
 - Wheel balance
Refer to "FRONT WHEEL-INSPECTION" section.
4. Check:
 - Wheel bearings
Refer to "FRONT WHEEL-INSPECTION" section.
5. Inspect:
 - Brake lining surface
Glazed areas → Remove.
Use a coarse sand paper.

NOTE: _____
After using the sand paper, clean of the polished particles with cloth.


www.legends-yamaha-enduros.com

5



6. Measure:
 - Brake lining thickness
Out of specification → Replace.

① Measuring points

	Brake Lining Thickness: 4 mm (0.16 in)
	Wear Limit: 2 mm (0.08 in)

NOTE: _____
Replace the brake shoes as a set if either is found to be worn to the wear limit.


7. Inspect:

- Brake drum inner surface
Oil/Scratches → Remove.

Oil	Use a rag soaked in lacquer thinner or solvent.
Scratches	Use a emery cloth (lightly and evenly polishing)

8. Measure:

- Brake drum inside diameter.
Out of specification → Replace.



Brake drum inside diameter:
95 mm (3.7 in)
< **Wear limit** >
96 mm (3.8 in)

9. Inspect:

- Camshaft face
Wear → Replace.

NOTE:

www.legendsofmotocross.com

Before removing the cam lever, put a match mark (punches) on the cam lever and camshaft to indicate their positions for easy assembly.

10. Clean:

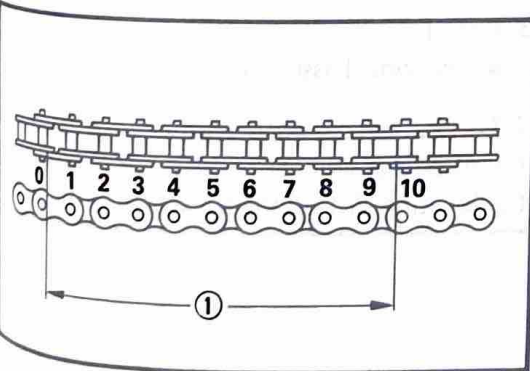
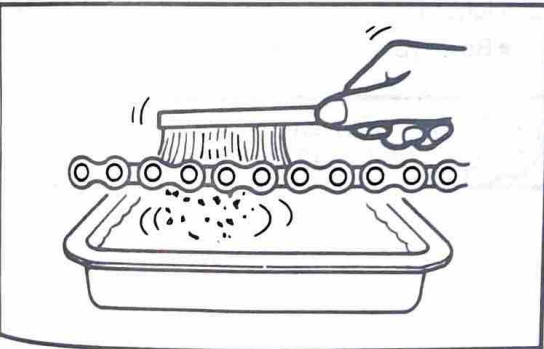
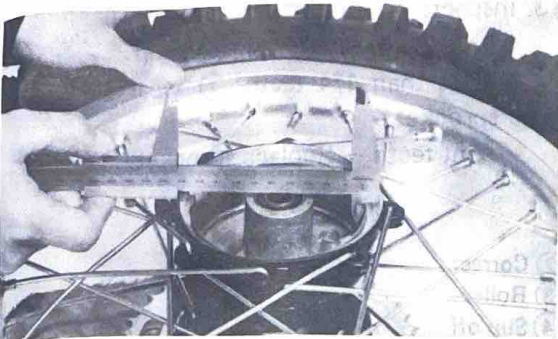
- Drive chain
Place it in solvent, and brush off as much dirt as possible. Then remove the chain from the solvent and dry the chain.

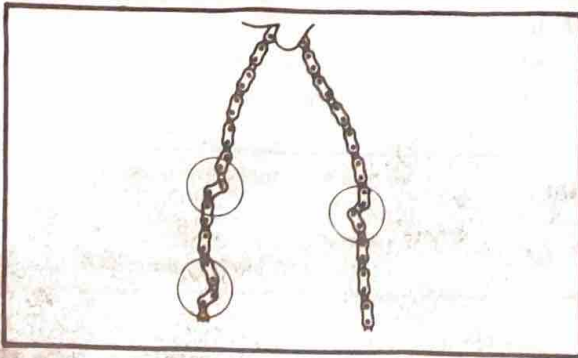
11. Measure:

- Drive chain length (10 links) ①
Out of specification → Replace.



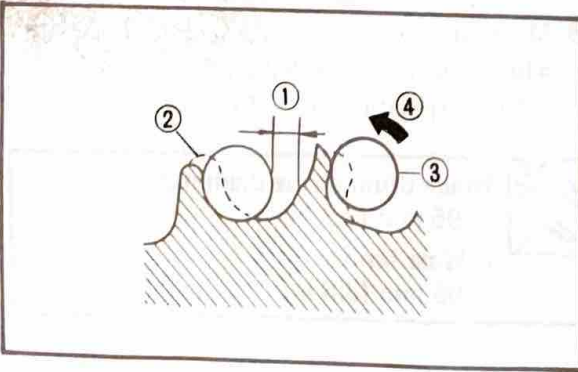
Drive Chain Length (10 links):
Limit: 123 mm (4.84 in)





12. Check:

- Drive chain stiffness
Clean and oil the chain and hold as illustrated Stiff → Replace drive chain.



13. Inspect:

- Drive sprocket/Driven sprocket
More than 1/4 teeth ① wear → Replace sprocket.
Bent teeth → Replace sprocket.

- ② Correct
- ③ Roller
- ④ Slip off

INSTALLATION

Reverse the "REMOVAL" procedures. Note the following points.

- 1. Apply the lithium soap base grease to the dust seal lips.

5

2. Tighten:

- Bolts (Drive sprocket)



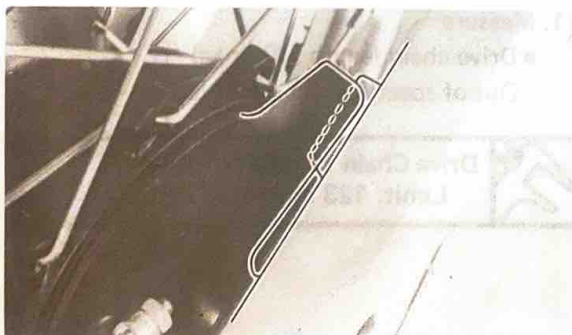
Bolt (Driven Sprocket):
26 Nm (2.6 m·kg, 19 ft·lb)

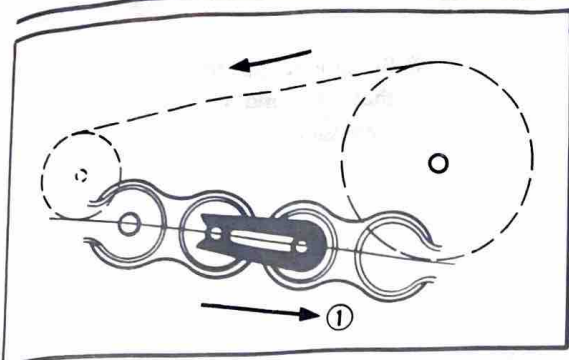
3. Install:

- Rear wheel assembly

NOTE:

- Be sure the swingarm boss correctly engages the locating slot on the brake shoe plate.





4. Install:
- Drive chain

NOTE: _____
 During reassembly, the master link clip must be installed with the rounded end facing the direction of travel.

WARNING: _____
Always use a new chain joint.


① Turning direction

5. Lubricate:
- Drive chain

	<p>Recommended Chain Lube: Yamaha Chain Lube</p>
--	--

6. Adjust:
- Drive chain slack
 Refer to the "CHAPTER 2. – DRIVE CHAIN SLACK ADJUSTMENT" section.
 - Rear brake free play
 Refer to the "CHAPTER 2. – REAR BRAKE ADJUSTMENT" section.

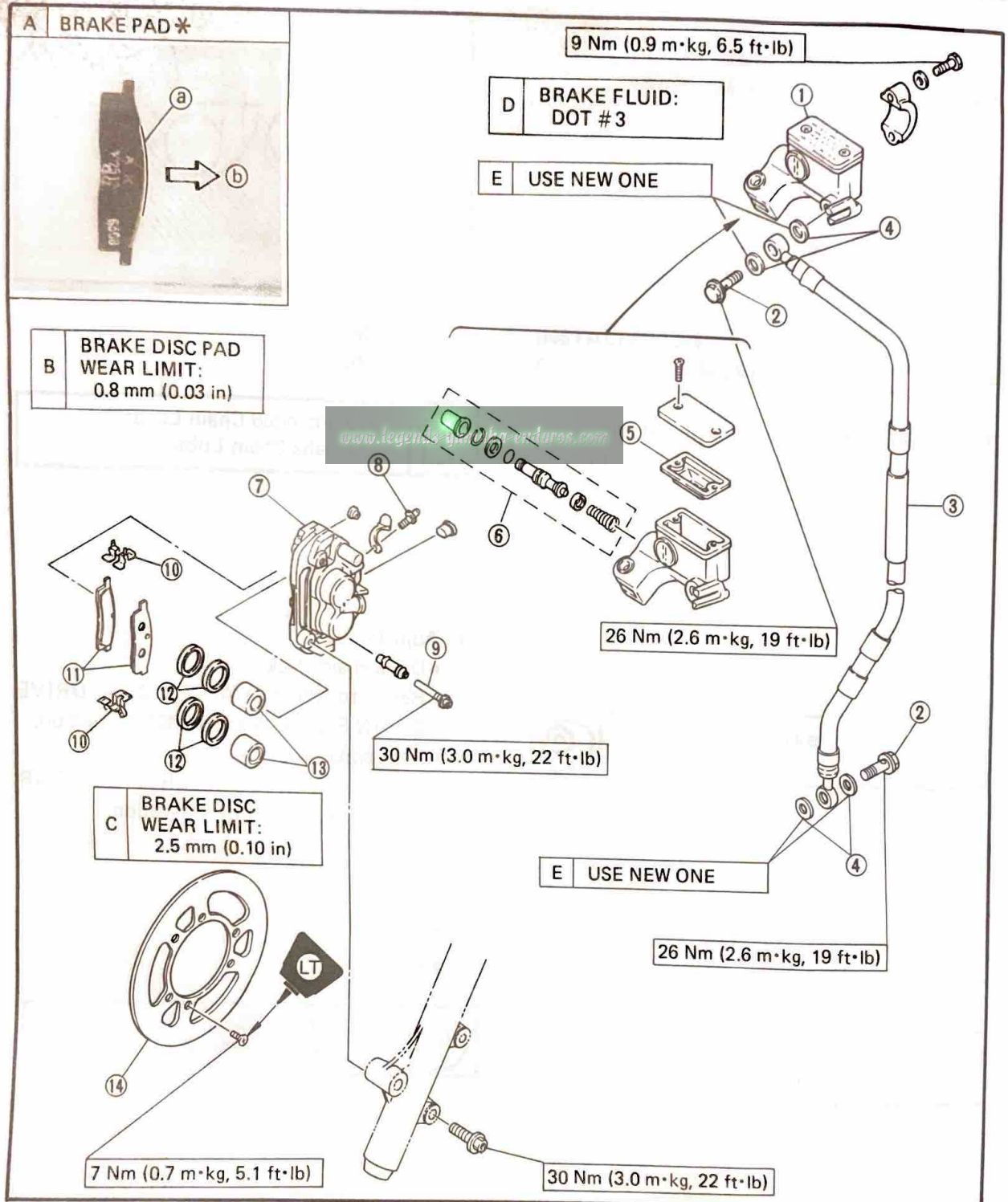
7. Tighten:
- Axle nut

	<p>Axle Nut: 85 Nm (8.5 m·kg, 61 ft·lb)</p>
---	---

FRONT BRAKE

- ① Master cylinder
- ② Union bolt
- ③ Brake hose
- ④ Copper washer
- ⑤ Diaphragm
- ⑥ Master cylinder kit
- ⑦ Brake caliper
- ⑧ Air bleed screw
- ⑨ Retaining bolt
- ⑩ Pad spring
- ⑪ Brake pad
- ⑫ Piston seal kit
- ⑬ Piston
- ⑭ Brake disc

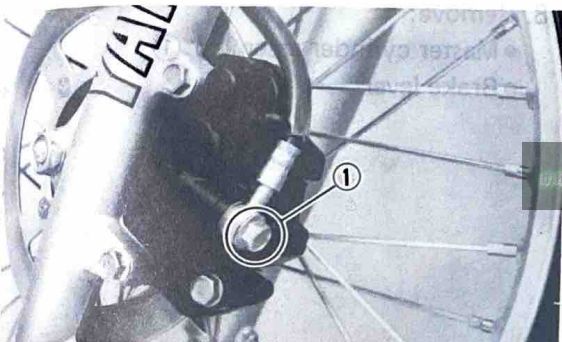
* Be sure to position the pad so that its round side (a) is backward (b).



5

CAUTION:

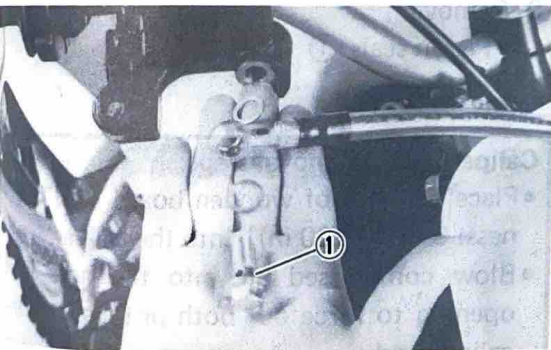
Disc brake components rarely require disassembly. Do not disassemble components unless absolutely necessary. If any hydraulic connection in the system is opened, the entire system should be disassembled, drained, cleaned and then properly filled and bled upon reassembly. Do not use solvents on brake internal components. Solvents will cause seals to swell and distort. Use only clean brake fluid for cleaning. Use care with brake fluid. Brake fluid is injurious to eyes and will damage painted surfaces and plastic parts.

**REMOVAL**

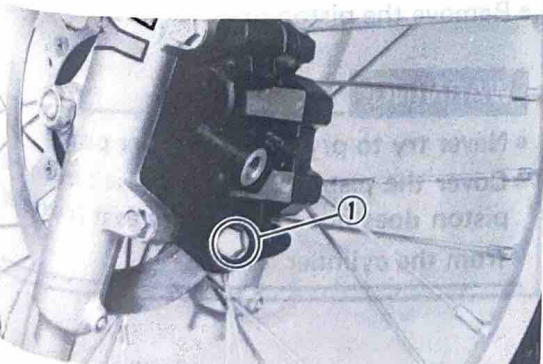
1. Remove:
 - Union bolt ①
2. Drain:
 - Brake fluid

NOTE:

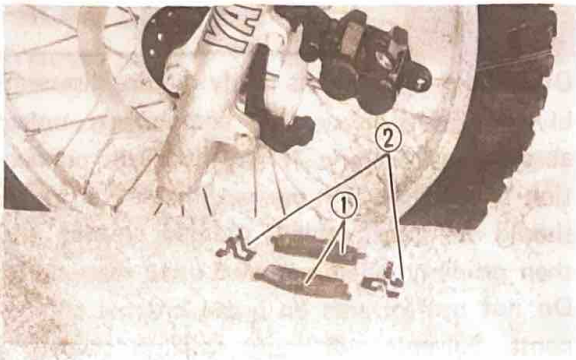
Place the open hose end into a container and pump the old fluid out carefully.



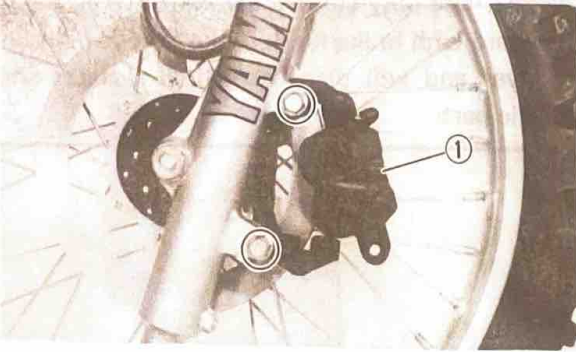
3. Remove:
 - Union bolt ①



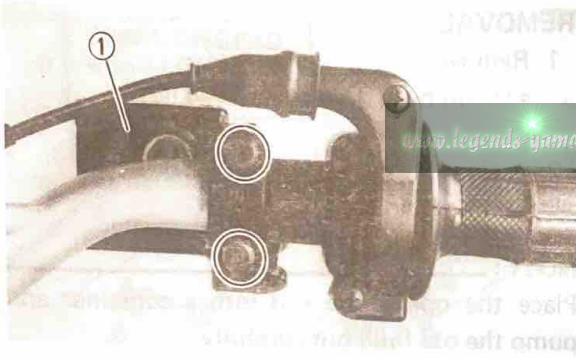
4. Remove:
 - Retaining bolt ①
5. Turn the caliper body counterclockwise.



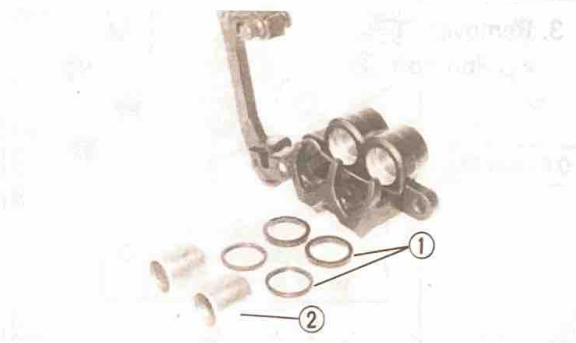
6. Remove:
- Brake pads ①
 - Pad springs ②



7. Remove:
- Brake caliper assembly ①



8. Remove:
- Master cylinder assembly ①
 - Brake lever



9. Remove:
- Piston seals ①
 - Pistons ②



Caliper piston removal steps:

- Place a piece of wooden board ③ [Thickness: 5 mm (0.20 in)] into the caliper.
- Blow compressed air into the hose joint opening to force out both pistons from the caliper body.
- Remove the piston seals.

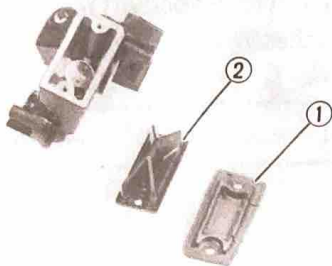
WARNING:

- Never try to pry out the caliper piston.
- Cover the piston with a rag. Use care so that piston does not cause injury as it is expelled from the cylinder.

5

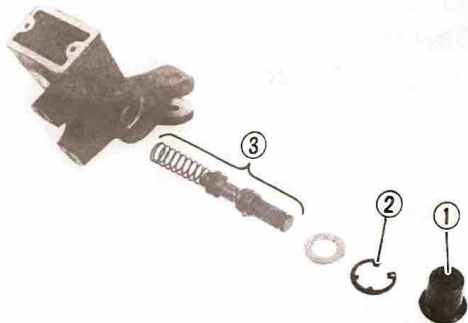
10. Remove:

- Master cylinder cap ①
- Diaphragm ②



11. Remove:

- Dust boots ①
- Circlip ②
- Master cylinder kit ③




INSPECTION

Recommended Brake Component Replacement Schedule:	
Brake Pads	As required
Piston Seal Dust Seal	Every two years
Brake Hoses	Every four years
Brake Fluid	Replace only when brakes are disassembled

1. Inspect:

- Brake pads
- Over specified limit → Replace.





Wear Limit (a) :
0.8 mm (0.031 in)

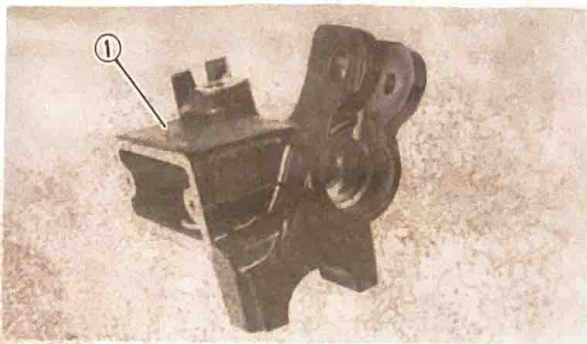
2. Inspect:

- Piston ①
Rust/Wear/Damage → Replace.
- Piston seals ②
Damage → Replace.



WARNING:

Replace the piston seals whenever a caliper is disassembled.

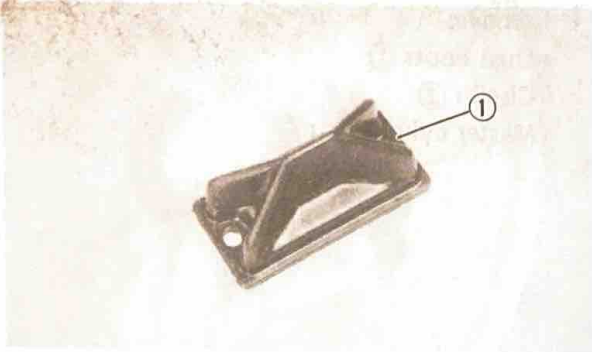


3. Inspect:

- Master cylinder body ①
Scratches/Wear → Replace.

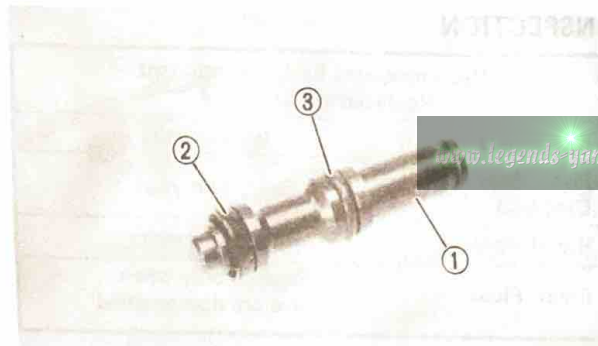
NOTE:

Clean all passages with new brake fluid.



4. Inspect:

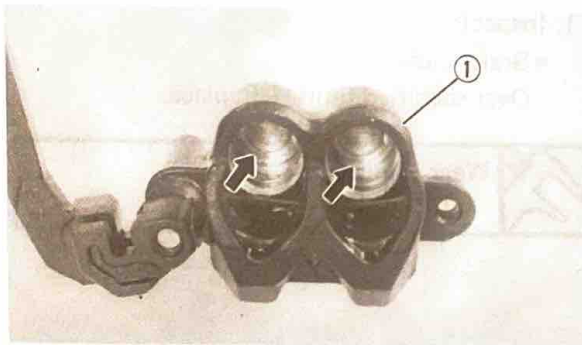
- Diaphragm ①
Damage → Replace.



5. Inspect:

- Master cylinder piston ①
- Master cylinder cup ②
- O-ring ③
Scratches/Wear/Damage → Replace as a set.

5

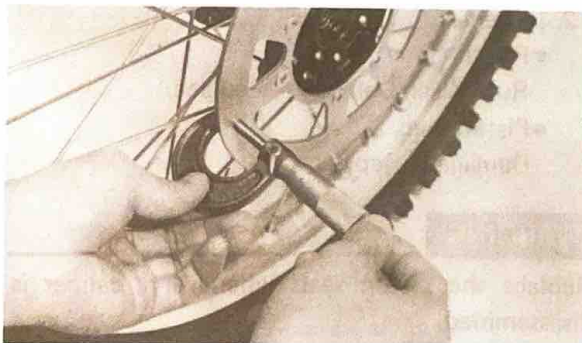


6. Inspect:

- Brake caliper ①
Scratches/Wear → Replace.

NOTE:

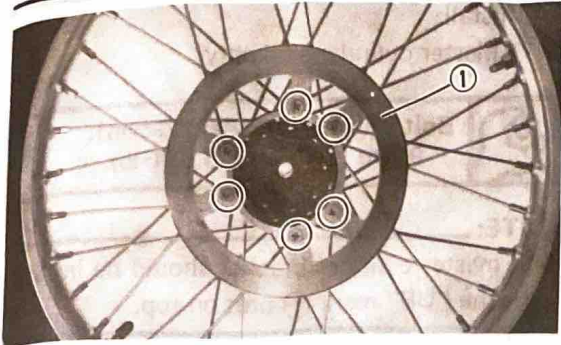
Use a new brake fluid for cleaning. Blow out all passages with compressed air.



7. Measure:

- Brake disc thickness
Out of specification → Replace.

	Brake Disc Thickness:
	3.0 mm (0.12 in)
	< Limit >: 2.5 mm (0.10 in)



Brake disc replacement steps:

- Remove the front wheel.
Refer to "FRONT WHEEL – REMOVAL" section.
- Remove the brake disc ① .
- Install the new brake disc and tighten the screws.



Screw (Brake Disc):
7 Nm (0.7 m·kg, 5.1 ft·lb)

NOTE: _____
Apply the LOCTITE® onto the screw threads.

8. Inspect:

- Brake hose
Cracks/Damage → Replace.

INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

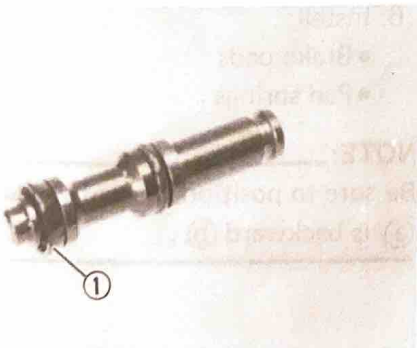
WARNING: _____

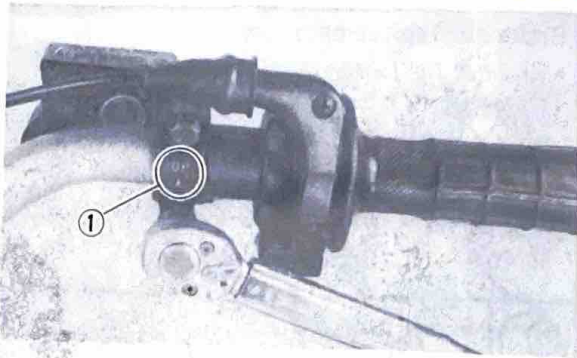
- All internal parts should be cleaned in new brake fluid only.
- Internal parts should be lubricated with brake fluid when installed.



Brake Fluid:
DOT #3

1. Install the master cylinder cup ① as shown.





2. Install:

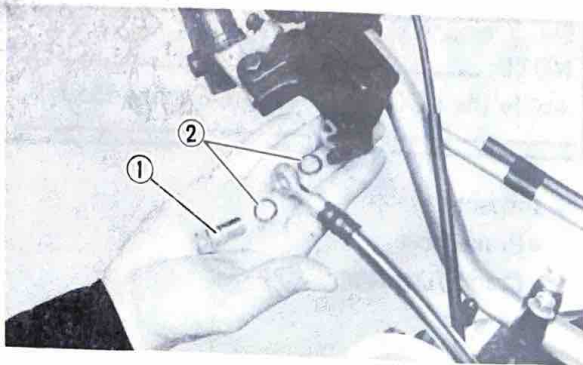
- Master cylinder assembly



Bolt (Master Cylinder Bracket):
9 Nm (0.9 m·kg, 6.5 ft·lb)

NOTE:

The master cylinder bracket should be installed with the "UP" mark ① unit on top.



3. Install:

- Union bolt ①
- Copper washers ②

WARNING:

Replace the copper washers whenever a union bolt is removed.

4. Tighten:

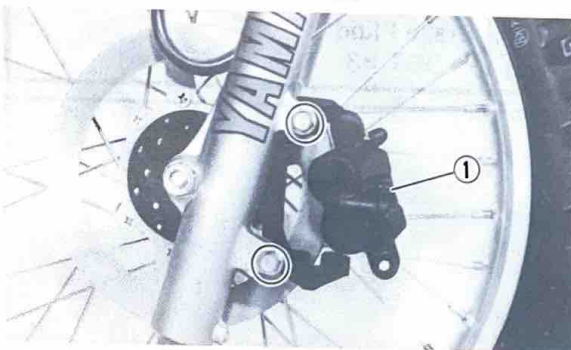
- Union bolt

www.legends-yamaha-entertainment.com



Union bolt:
26 Nm (2.6 m·kg, 19 ft·lb)

5

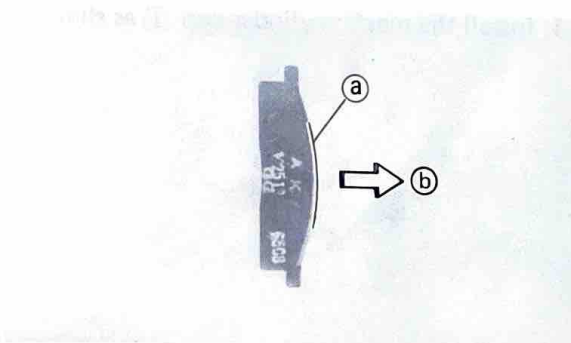


5. Install:

- Brake caliper assembly ① .



Bolt (Brake Caliper):
30 Nm (3.0 m·kg, 22 ft·lb)



6. Install:

- Brake pads
- Pad springs

NOTE:

Be sure to position the pad so that its round side ① is backward ② .

7. Apply:

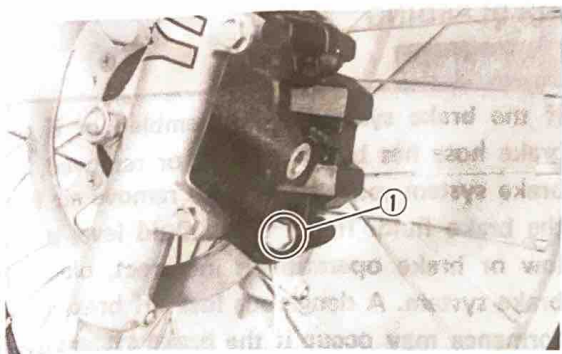
- Lithium base grease

Apply a light coating of grease to the retaining bolt.

8. Tighten:

- Retaining bolt ①.

	<p>Retaining Bolt: 30 Nm (3.0 m·kg, 22 ft·lb)</p>
---	--



9. Install:


- Union bolt ①
- Copper washer ②

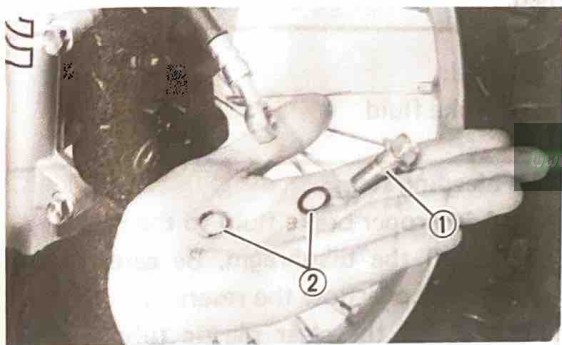
WARNING:

Replace the copper washers whenever a union bolt is removed.

10. Tighten:


- Union bolt

	<p>Union Bolt: 26 Nm (2.6 m·kg, 19 ft·lb)</p>
---	--



11. Fill:

- Brake system

	<p>Recommended Brake Fluid: DOT #3</p>
---	---

12. Air bleed

- Brake system

Refer to the "AIR BLEEDING" section.

AIR BLEEDING

WARNING:

If the brake system is disassembled or if any brake hose has been loosened or removed, the brake system must be bled to remove air from the brake fluid. If the brake fluid level is very low or brake operation is incorrect, bleed the brake system. A dangerous loss of braking performance may occur if the brake system is not bled.



1. Bleed:

- Brake fluid

Air bleeding steps:

- Add proper brake fluid to the reservoir.
- Install the diaphragm. Be careful not to spill or overflow the reservoir.
- Connect the clear plastic tube tightly to the caliper bleed screw.
- Put the end of the tube into a container.
- Slowly apply the brake lever several times.
- Pull in lever. Hold the lever in "on" position.
- Loosen the bleed screw. Allow the lever to travel slowly toward its limit.
- When the limit is reached, tighten the bleed screw.



Bleed Screw:

6 Nm (0.6 m·kg, 4.3 ft·lb)

- Repeat steps (e) to (h) until of the air bubbles have been removed from the system.

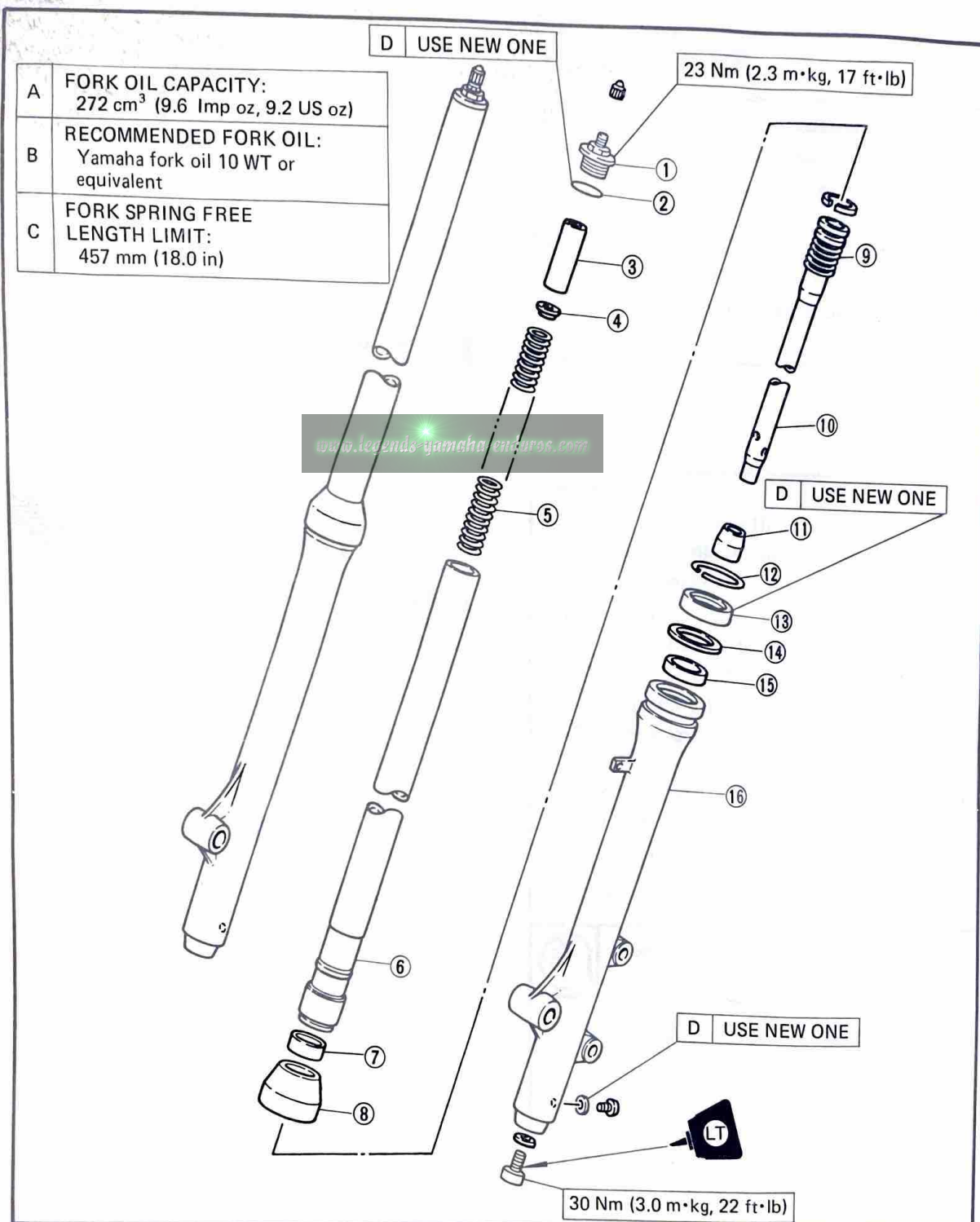
NOTE:

If bleeding is difficult, it may be necessary to let the brake fluid system stabilize for a few hours. Repeat the bleeding procedure when the tiny bubbles in the system have disappeared.

- j. Add brake fluid to the level line on the reservoir.

FRONT FORK

- ① Cap bolt
- ② O-ring
- ③ Spacer
- ④ Spring seat (Upper)
- ⑤ Fork spring
- ⑥ Inner fork tube
- ⑦ Slide bush
- ⑧ Dust seal
- ⑨ Rebound spring
- ⑩ Damper rod
- ⑪ Oil lock piece
- ⑫ Retaining clip
- ⑬ Oil seal
- ⑭ Seal spacer
- ⑮ Guide bush
- ⑯ Outer fork tube



5

REMOVAL

1. Place a suitable stand under the engine.

WARNING:

Securely support the machine so there is no danger of it falling over.

2. Remove:

- Front wheel

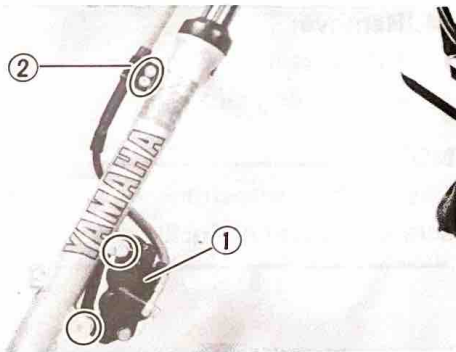
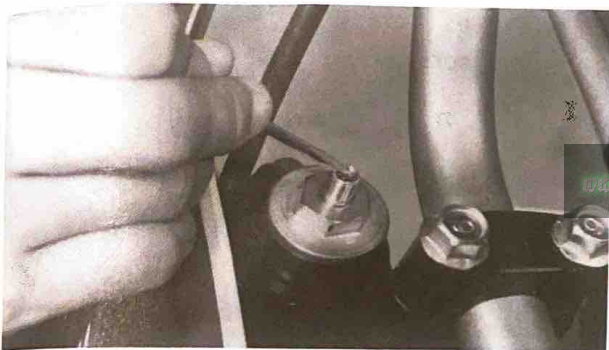
Refer to the "FRONT WHEEL – REMOVAL" section.

3. Remove:

- Air valve cap

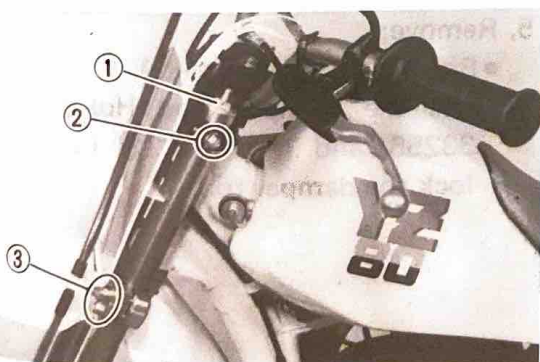
NOTE:

Keep the valve open by pressing it for several seconds so that the air can be let out of the inner tube.



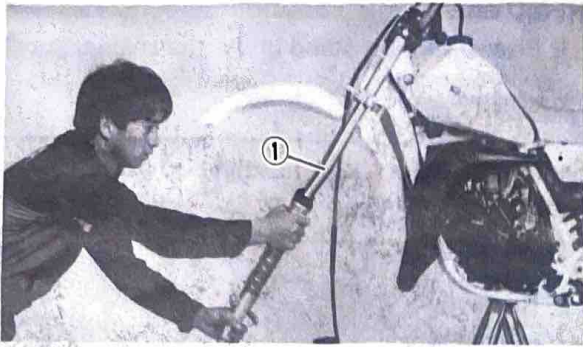
4. Remove:

- Brake caliper assembly ①
- Clamp (Brake hose) ②

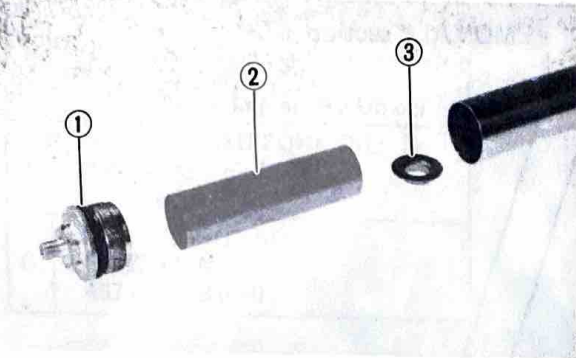
5

5. Loosen:

- Cap bolt ①
- Pinch bolt ② (Steering crown)
- Pinch bolts ③ (Under bracket)

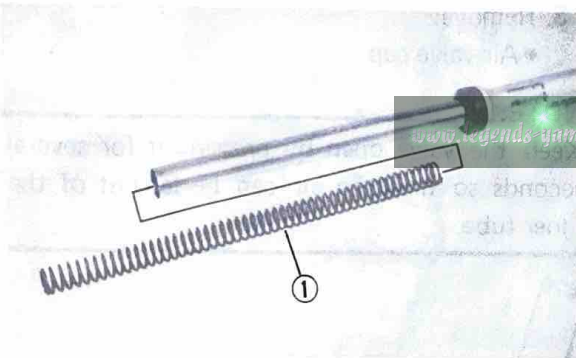


6. Remove:
- Front fork ①

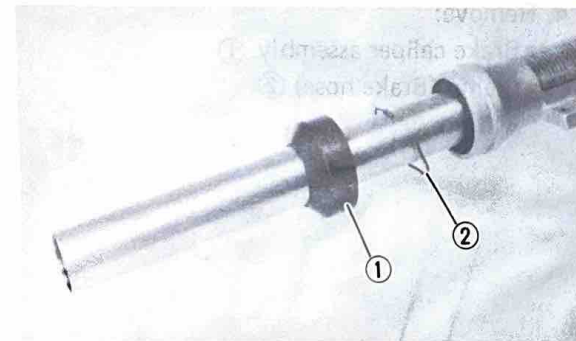


DISASSEMBLY

1. Remove:
 - Cap bolt ①
 - Spacer ②
 - Spring seat ③
2. Drain:
 - Fork oil



3. Remove:
 - Fork spring ①



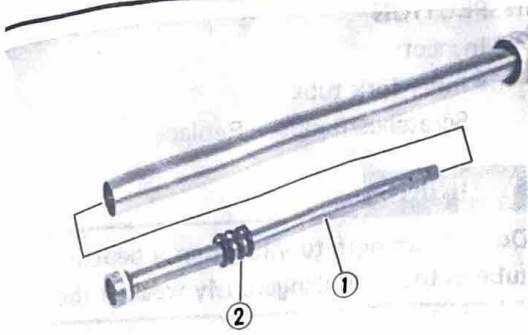
4. Remove:
 - Dust seal ①
 - Retaining clip ②

NOTE: _____
 Use a thin screwdriver, and be careful not to scratch the inner fork tube.



5. Remove:
 - Bolt (Cylinder complete)
 Use the Damper Rod Holder ① (YM-33256) and T-Handle ② (YM-01326) to lock the damper rod.

5



6. Remove:

- Damper rod ①
- Rebound spring ②

7. Remove:

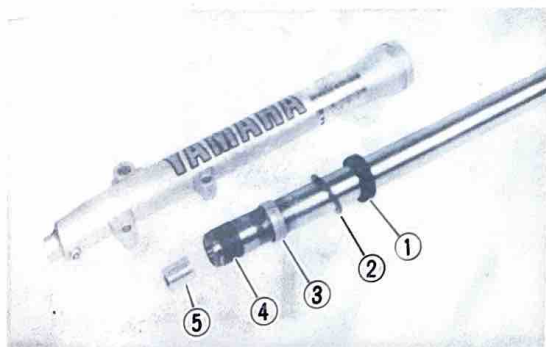
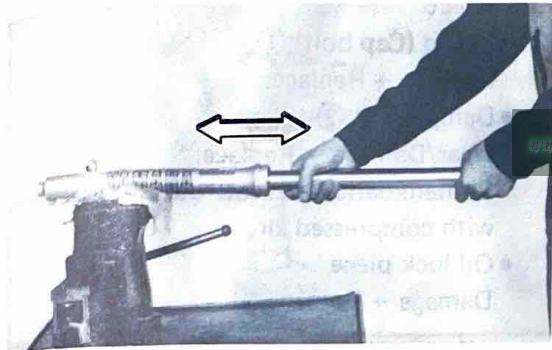
- Inner fork tube
- By the following removal steps.

Inner fork tube removal steps:

- Hold the fork leg horizontally.
- Clamp the caliper mounting boss of the outer fork tube securely in a vise having soft jaws.
- Pull out the inner fork tube from the outer tube by forceful, but carefully, withdrawing the inner fork tube.

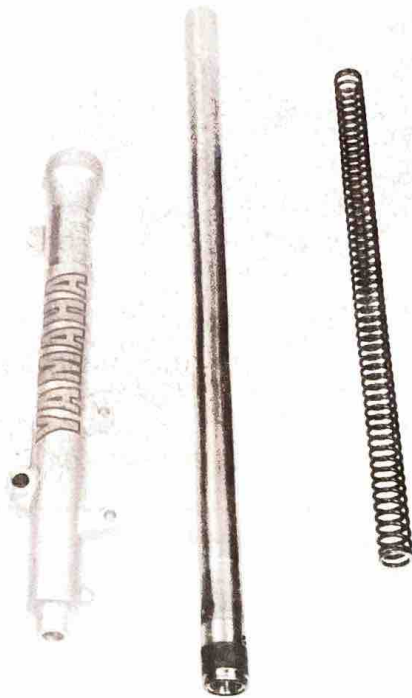
NOTE:

- Excessive force will damage the oil seal and seal spacer. The oil seal must be replaced.
- Avoid bottoming the inner tube in the outer tube during the above procedure, as the oil lock piece will be damaged.



8. Remove:

- Oil seal ①
- Seal spacer ②
- Slide bush ③
- Guide bush ④
- Oil lock piece ⑤

**INSPECTION**

1. Inspect:
 - Inner fork tube
Scratches/Bends → Replace.

WARNING:

Do not attempt to straighten a bent inner fork tube as this may dangerously weaken the tube.

2. Inspect:
 - Outer fork tube
Scratches/Bends/Damage → Replace.
 - Fork spring
Over specified limit → Replace.



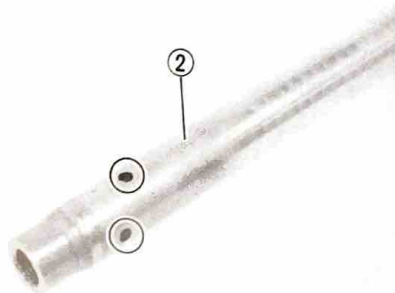
**Fork Spring Feel Length Limit:
457 mm (18.0 in)**



www.legends-yamaha-enduro.com

①

3. Inspect:
 - O-ring (Cap bolt) ①
Damage → Replace.
 - Damper rod ②
Wear/Damage → Replace.
Contamination → Blow out all oil passages with compressed air.
 - Oil lock piece
Damage → Replace.



②

5

ASSEMBLY

Reverse the "DISASSEMBLY" procedure. Note the following points.

NOTE:

In front fork assembly, be sure to use following new parts. Do not reuse them.

- Slide bush
- Guide bush
- Oil seal
- Dust seal

1. Tighten:

- Bolt (Cylinder complete)

Use the Damper Rod Holder (YM-33256) and T-Handle (YM-01326) to lock the damper rod.



Bolt (Cylinder Complete):
30 Nm (3.0 m·kg, 22 ft·lb)
LOCTITE®

2. Install:

- Slide bush ① (New)

Into outer tube.

Use a Fork Seal Driver Weight ② (YM-33963) and Adapter ③ (YM-01368).

3. Apply:

- Oil
- To oil seal ④ .

4. Install:

- Seal spacer ⑤
- Oil seal (New)

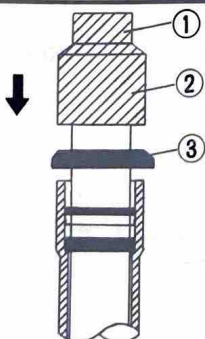
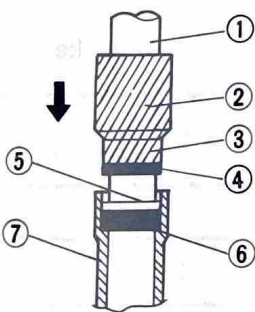
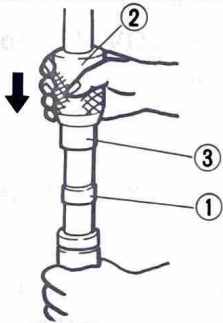
Use the Special Tools ② , ③ (YM-33963, YM-01368).

① Inner tube ⑥ Slide bush ⑦ Outer tube

5. Install:

- Retaining clip
- Dust seal ③ (New)

Use the Special Tools ① , ② (YM-33963, YM-01368).



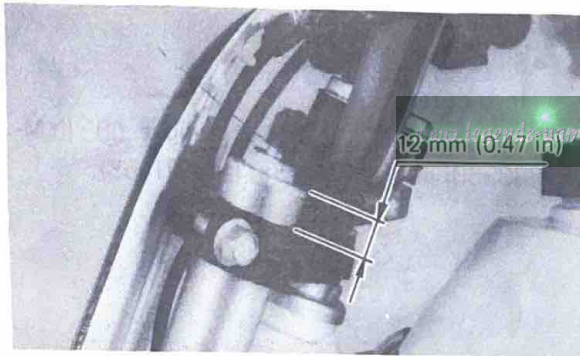
6. Fill:
- Front fork



Each Fork:
272 cm³ (9.6 Imp oz, 9.2 US oz)

Recommended Oil:
Yamaha Fork Oil 10WT or equivalent
After filling slowly pump the forks up and down to distribute the oil

7. Install:
- Cap bolt
- Apply the lithium soap base grease to the O-ring and temporarily tighten the cap bolt.



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Install:
- Front fork(s)
- Temporarily tighten the pinch bolts.

NOTE: _____
Hold the inner tube with its top 12 mm (0.47 in) above the top of the steering crown.

2. Tighten:
- Pinch bolts (Under bracket)



Pinch Bolt (Under Bracket):
23 Nm (2.3 m·kg, 17 ft·lb)

NOTE: _____
Do not tighten the steering crown pinch bolt.

3. Tighten:
- Cap bolt
 - Pinch bolt (Steering crown)



Cap Bolt:
23 Nm (2.3 m·kg, 17 ft·lb)
Pinch Bolt (Steering Crown):
18 Nm (1.8 m·kg, 13 ft·lb)

4. Install:

- Brake caliper assembly



Bolt (Brake Caliper):
30 Nm (3.0 m·kg, 22 ft·lb)

5. Install:

- Front wheel

Refer to the "FRONT WHEEL – INSTALLATION" section.

6. Adjust:

- Front fork air pressure

Refer to the "CHAPTER 2. – FRONT FORK INSPECTION AND ADJUSTMENT" section.

www.legends-yamaha-enduros.com

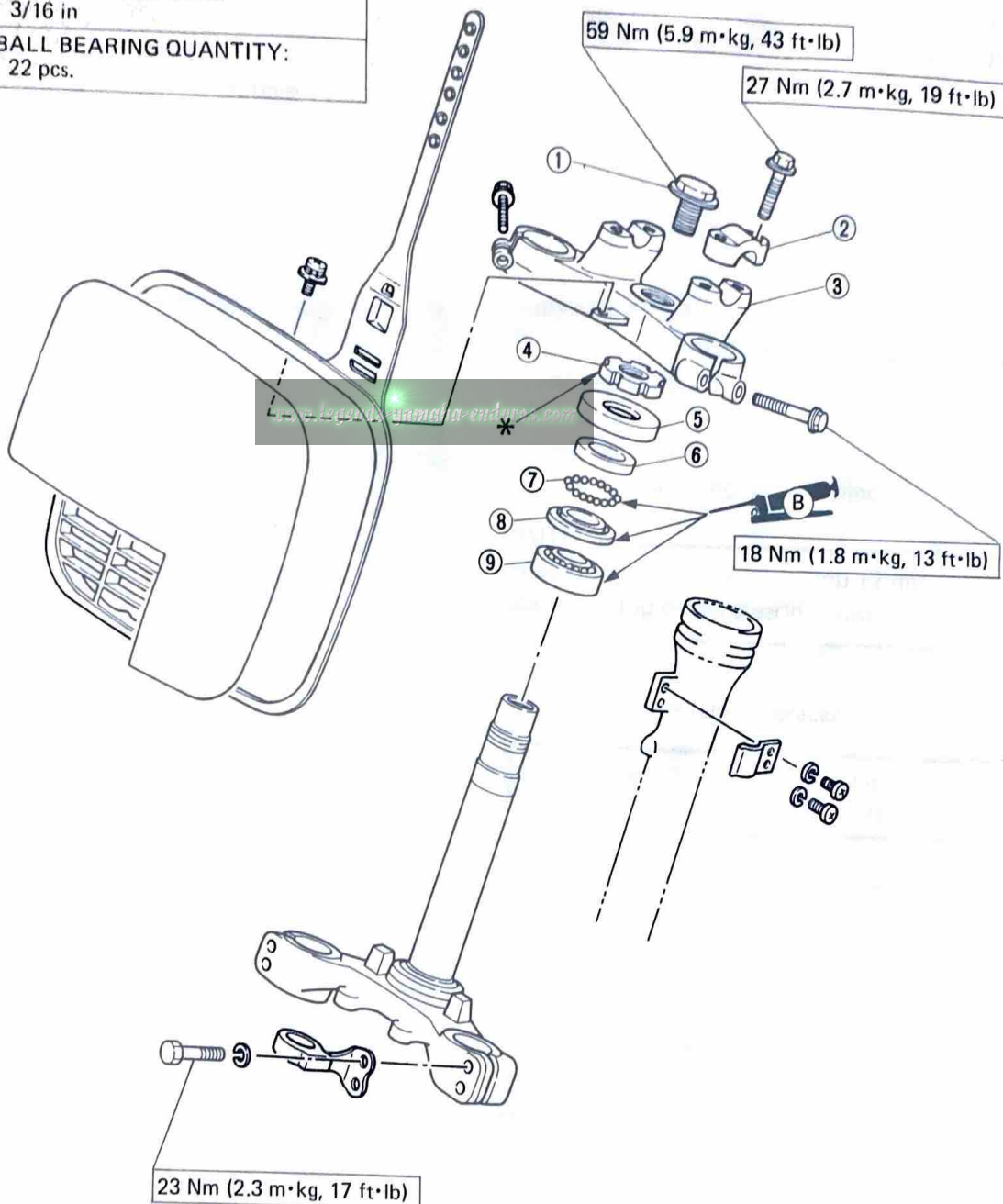
STEERING HEAD

- ① Steering stem bolt
- ② Handlebar holder
- ③ Steering crown
- ④ Ring nut
- ⑤ Bearing race cover
- ⑥ Bearing race (Upper)
- ⑦ Ball bearing
- ⑧ Bearing race (Lower)
- ⑨ Bearing

* Ring nut tightening steps:

- 1) First, tighten the ring nut 37 Nm (3.7 m·kg, 27 ft·lb) by using the torque wrench, then loosen the ring nut one turn.
- 2) Retighten the ring nut 10 Nm (1.0 m·kg, 7.2 ft·lb)

A	BALL BEARING SIZE: 3/16 in
B	BALL BEARING QUANTITY: 22 pcs.



5

REMOVAL

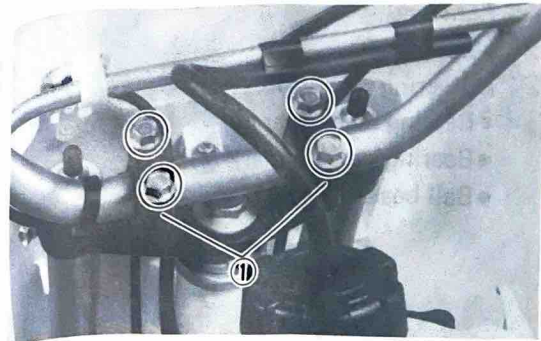
1. Place a suitable stand under the engine.

WARNING:

Securely support the machine so there is no danger of it falling over.

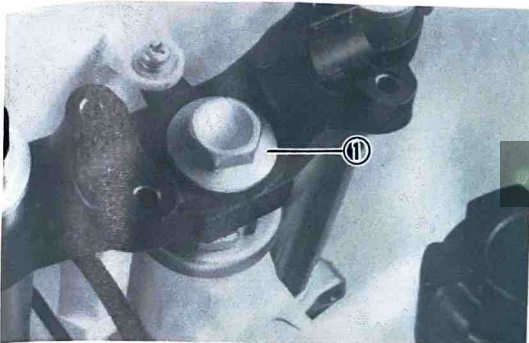
2. Remove:

- Handlebar holders ①



3. Remove:

- Steering stem bolt ①

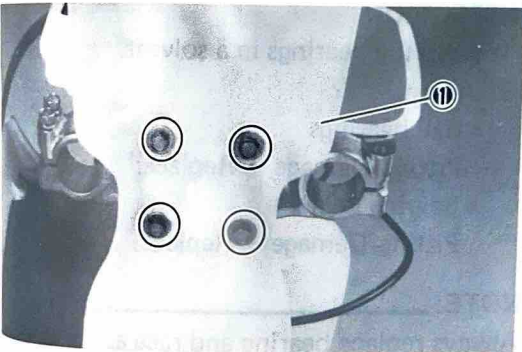


4. Remove:

- Front wheel
Refer to the "FRONT WHEEL – REMOVAL" section.
- Front forks
Refer to the "FRONT FORK – REMOVAL" section.

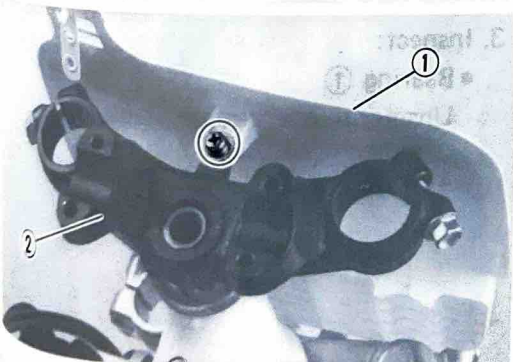
5. Remove:

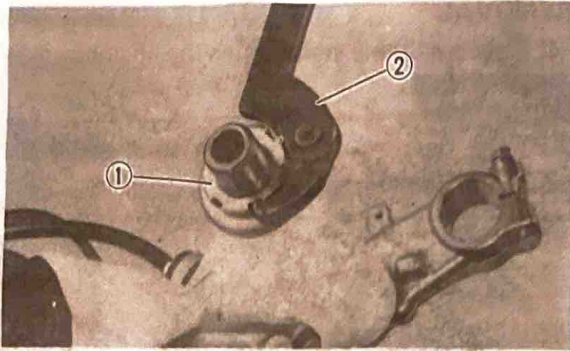
- Front fender ①



6. Remove:

- Number plate ①
- Steering crown ②





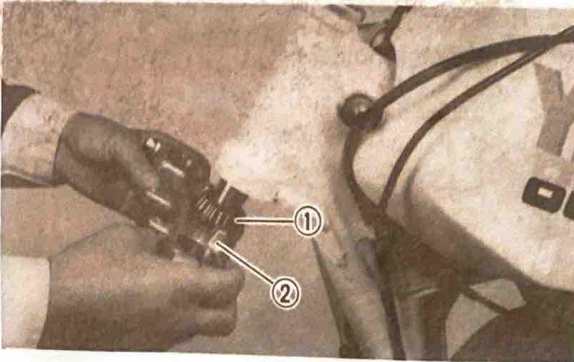
7. Remove:

- Ring nut ①

Use the Ring Nut Wrench ② (YU-01268).

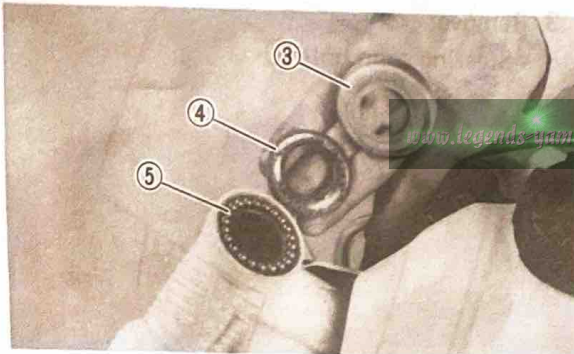
WARNING:

Support the under bracket so that it may not fall down.



8. Remove:

- Bearing ①
- Steering stem ②
- Bearing race cover ③
- Bearing race (Upper) ④
- Ball bearing ⑤

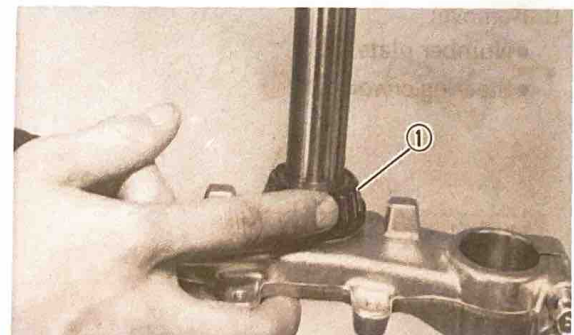


INSPECTION

1. Wash the bearings in a solvent.
2. Inspect:
 - Ball bearings
Pitting/Damage → Replace.
 - Bearing race
Pitting/Damage → Replace.

NOTE:

Always replace bearing and race as a set.



3. Inspect:

- Bearing ①
Unsmooth operation → Replace.

5


INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Apply:

- Grease

To the bearings (Upper and lower).

	Wheel Bearing Grease
---	-----------------------------

2. Install:

- Steering stem

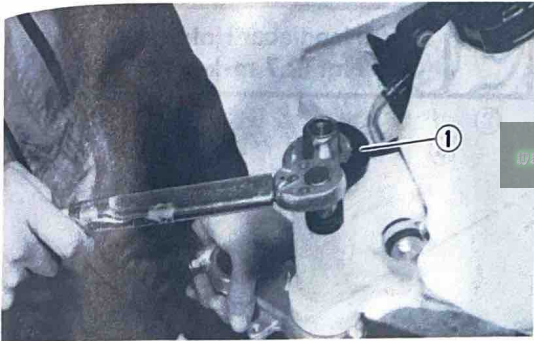
CAUTION:

Hold the steering stem until it is secured.

3. Tighten:

- Ring nut

By the following steps.



Ring nut tightening steps:

- Tighten the ring nut using the Ring Nut Wrench ① (YU-33975).

NOTE:

Set the torque wrench to the ring nut wrench so that they form a right angle.



Ring Nut (Initial Tightening):
37 Nm (3.7 m·kg, 27 ft·lb)

- Loosen the ring nut one turn.
- Righten the ring nut using the Ring Nut Wrench.

WARNING:

Avoid over-tightening.



Ring Nut (Final Tightening):
10 Nm (1.0 m·kg, 7.2 ft·lb)

4. Install:

- Front forks

Refer to the "FRONT FORK – INSTALLATION" section.

- Front wheel

Refer to the "FRONT WHEEL – INSTALLATION" section.

5. Tighten:

- Steering stem bolt



Steering Stem Bolt:
59 Nm (5.9 m·kg, 43 ft·lb)

6. Inspect:

- Steering operation

Turn the steering from lock to lock.
Unsmooth operation → Repair.

7. Install:

- Handlebar
- Handlebar holder

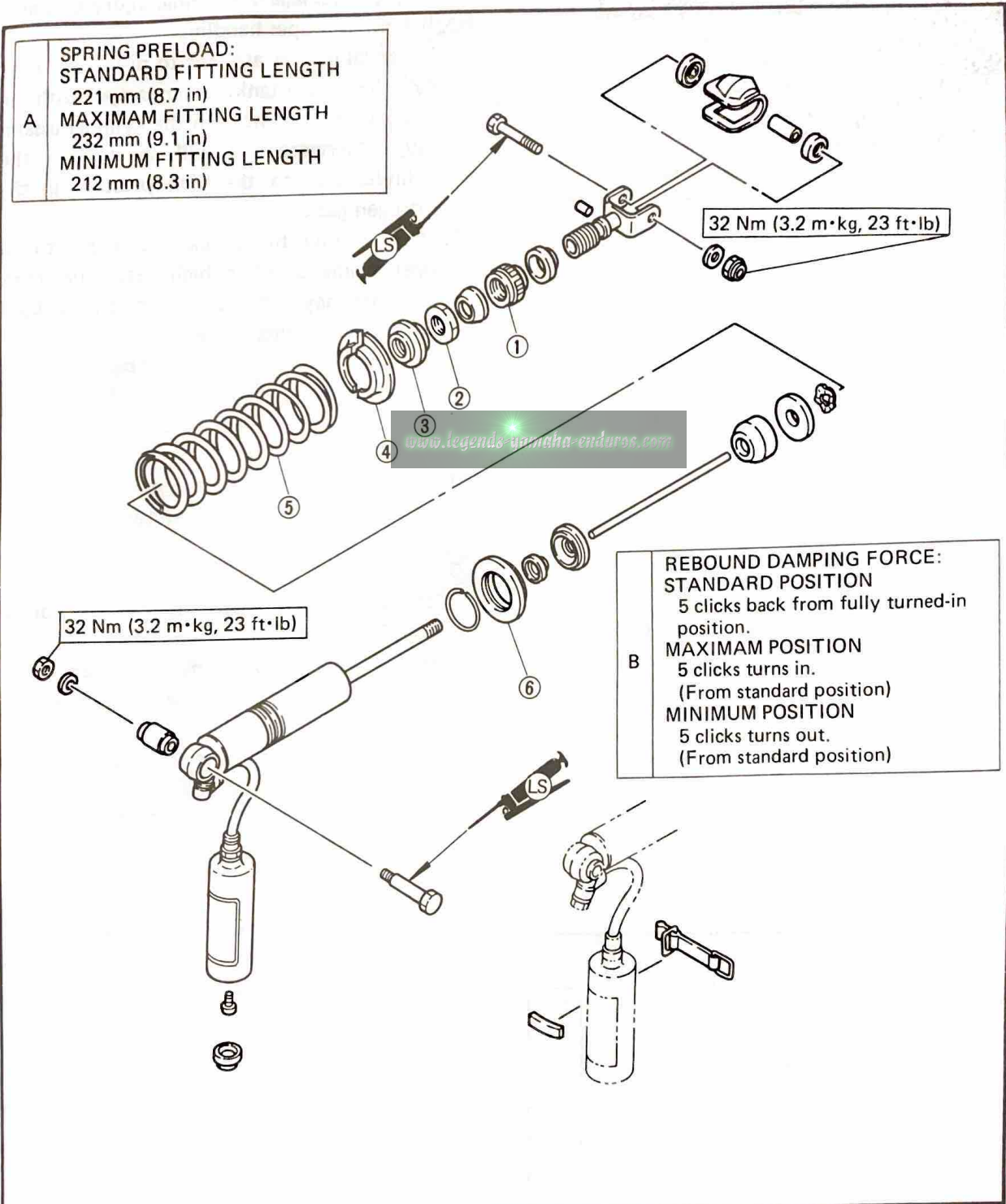


Bolt (Handlebar Holder):
27 Nm (2.7 m·kg, 19 ft·lb)

www.legends-yamaha-enduros.com

REAR SHOCK ABSORBER
(MONOCROSS SUSPENSION "DE CARBON" SYSTEM)

- ① Rebound damping adjuster
- ② Lock nut
- ③ Spring preload adjuster
- ④ Spring retainer
- ⑤ Spring
- ⑥ Spring seat





HANDLING NOTES

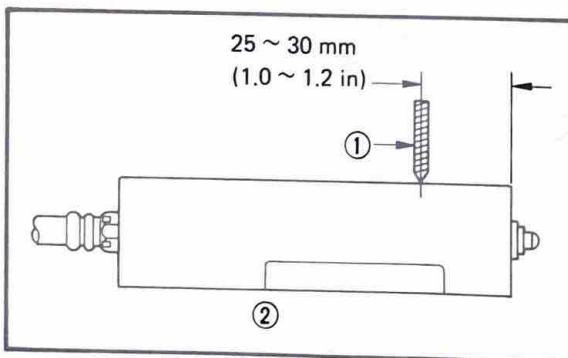
WARNING:

This shock absorber is provided with a separate type tank filled with high-pressure nitrogen gas. To prevent the danger of explosion, read and understand the following information before handling the shock absorber.

The manufacturer can not be held responsible for property damage or personal injury that may result from improper handling.

1. Never tamper or attempt to disassemble the cylinder or the tank. Never tamper with the nut securing the hose to the cylinder assembly; otherwise, oil will spurt from the cylinder due to the high pressure in the nitrogen gas tank.
2. Never throw the shock absorber into an open flame or other high heat. The shock absorber may explode as a result of nitrogen gas expansion and/or damage to the hose.
3. Be careful not to damage any part of the gas tank. A damaged gas tank will impair the damping performance or cause a malfunction.
4. Use care not to damage any part of the hose. Any break in the hose may result in a spurt of oil under highpressure.
5. Take care not to scratch the contact surface of the piston rod with the cylinder; or oil could leak out.
6. Never attempt to remove the plug at the bottom of the nitrogen gas tank. It is very dangerous to remove the plug.
7. When scrapping the shock absorber, follow the instructions on disposal.

www.legends-yamaha-enduro.com

**NOTE ON DISPOSAL (Yamaha dealers only)**

Before disposing the shock absorber, be sure to extract the nitrogen gas. To do so, drill a 2 or 3 mm (0.08 ~ 0.12 in) hole through the tank at a position 25 ~ 30 mm (1.0 ~ 1.2 in) from the bottom end of the tank. At this time, wear eye protection to prevent eye damage from escaping gas and/or metal chips.

- ① Drill 2 ~ 3 mm ϕ (0.08 ~ 0.12 in ϕ)
- ② Wear eye protection!

WARNING:

To dispose of a damaged or worn-out shock absorber, take the unit to your Yamaha dealer for this disposal procedure.

REMOVAL

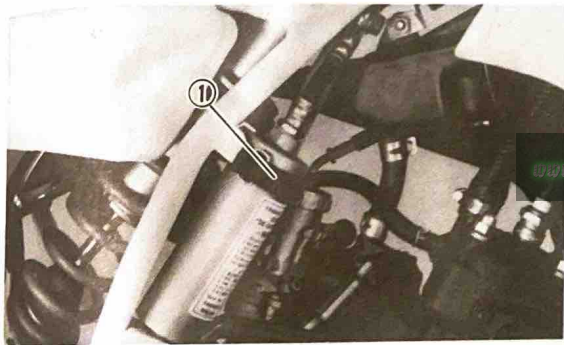
1. Place the suitable stand under the engine.

WARNING:

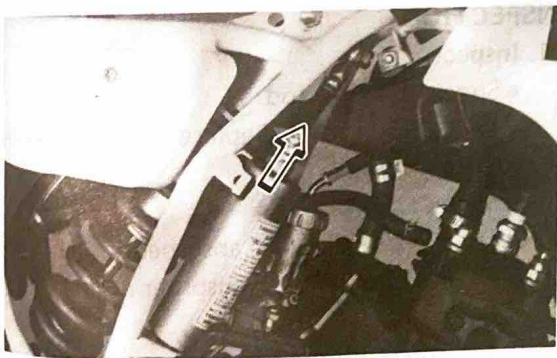
Securely support the machine so there is no danger of it falling over.

2. Remove:

- Seat
- Fuel tank
- Sub tank holder ①

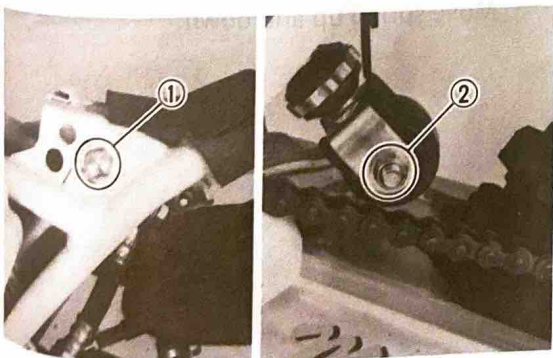


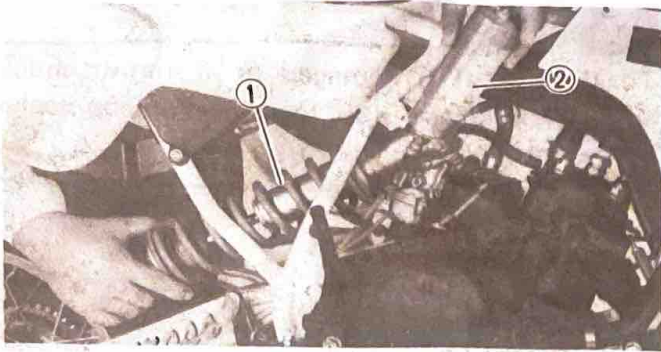
3. Pull up the sub tank.



4. Remove:

- Bolt (Rear shock absorber-Upper) ①
- Bolt (Rear shock absorber-Lower) ②

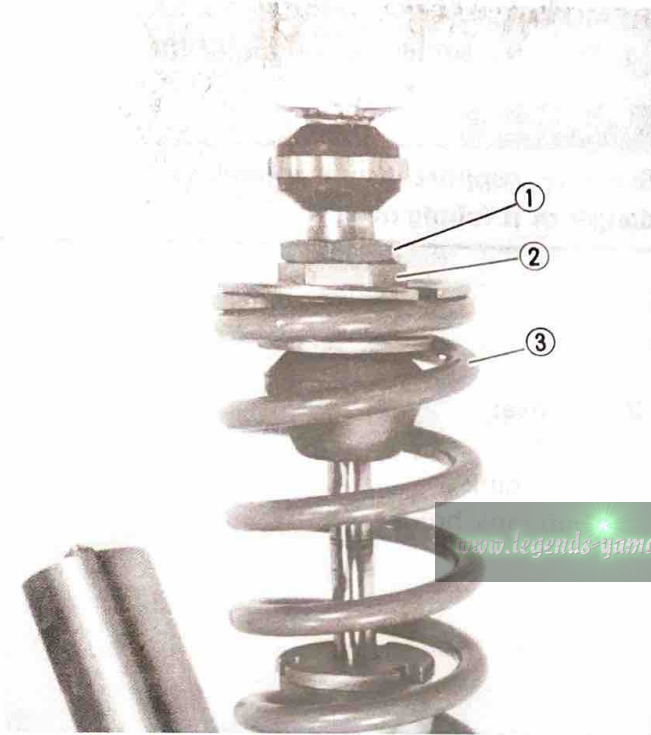




5. Remove:
- Rear shock absorber ①

CAUTION:

Avoid damaging the rubber hose and shock absorber gas chamber ②.

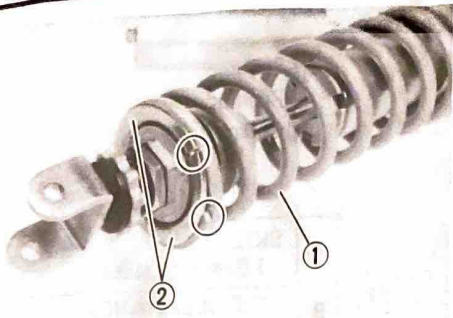


6. Loosen:
- Lock nut (Spring preload) ①
 - Adjuster (Spring preload) ②
7. Push down the spring.
8. Remove:
- Locknut (Spring preload) ①
 - Adjuster (Spring preload) ②
 - Spring ③

5

**INSPECTION**

1. Inspect:
- Shock absorber rod
 - Bends/Damage → Replace absorber assembly.
 - Shock absorber
 - Oil leaks → Replace absorber assembly.
 - Gas leaks → Replace absorber assembly.
 - Spring
 - Fatigue → Replace spring.
 - Move spring up and down.



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Install:
 - Spring ①
 - Spring retainer ②


NOTE: _____
 The spring retainer and the spring end do not overlap each other.

2. Install:
 - Rear shock absorber assembly

CAUTION: _____
 Avoid damaging the rubber hose and shock absorber gas chamber.

3. Tighten:
 - Nut (Rear shock absorber-Upper)
 - Nut (Rear shock absorber-Lower)

NOTE: _____
 Before installing the rear shock absorber mounting bolts, apply the lithium soap base grease to them.

	Nut (Rear Shock Absorber-Upper): 32 Nm (3.2 m·kg, 23 ft·lb)
	Nut (Rear Shock Absorber-Lower): 32 Nm (3.2 m·kg, 23 ft·lb)

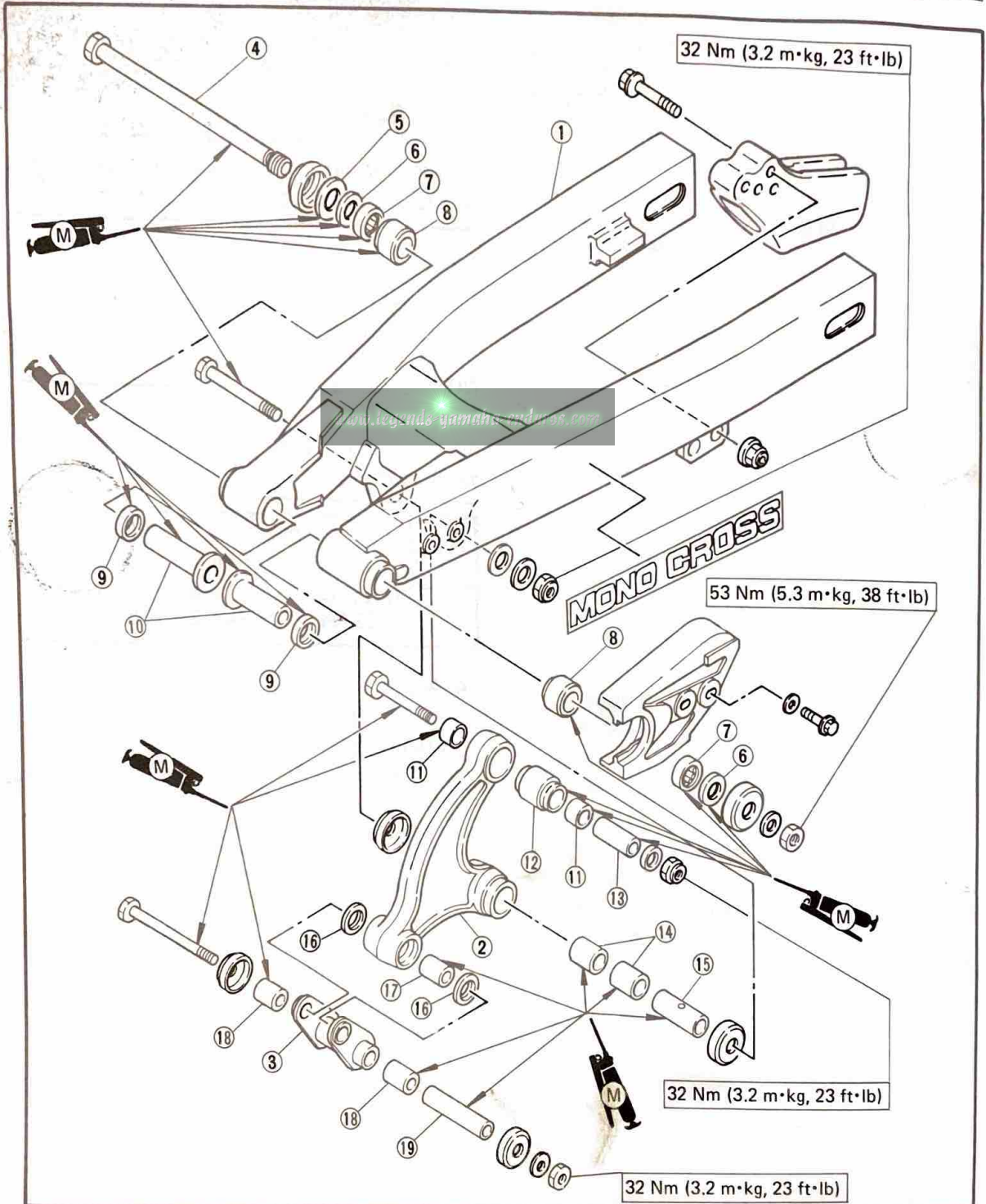
4. Adjust:
 - Spring preload
 - Damping force

Refer to "CHAPTER 2. REAR SHOCK ABSORBER INSPECTION AND ADJUSTMENT" section.

SWINGARM

- | | | |
|------------------|-----------------|-----------------|
| ① Swing arm | ⑨ Oil seal | ⑬ Collar |
| ② Relay arm | ⑩ Collar | ⑭ Bushing |
| ③ Connecting rod | ⑪ Solid bushing | ⑮ Solid bushing |
| ④ Pivot shaft | ⑫ Bushing | ⑯ Oil seal |
| ⑤ Shim | ⑬ Collar | |
| ⑥ Plain washer | ⑭ Bushing | |
| ⑦ Bearing | ⑮ Solid bushing | |
| ⑧ Bushing | ⑯ Oil seal | |
| | | ⑰ Bushing |
| | | ⑱ Collar |

A	SIDE PLAY: 1.0 mm (0.04 in)
B	SIDE CLEARANCE: 0.4 ~ 0.7 mm (0.016 ~ 0.028 in)



5



REMOVAL

1. Place a suitable stand under the engine.

WARNING:

Securely support the machine so there is no danger of it falling over.

2. Remove:

- Rear wheel
Refer to the "REAR WHEEL, REAR BRAKE AND DRIVE CHAIN – REMOVAL" section.
- Rear shock absorber
Refer to the "REAR SHOCK ABSORBER – REMOVAL" section.
- Bolt (Relay arm) ①

3. Check:

- Swingarm (Side play)
Over specified limit → Replace bushing or bearings.
Move swingarm from side to side.



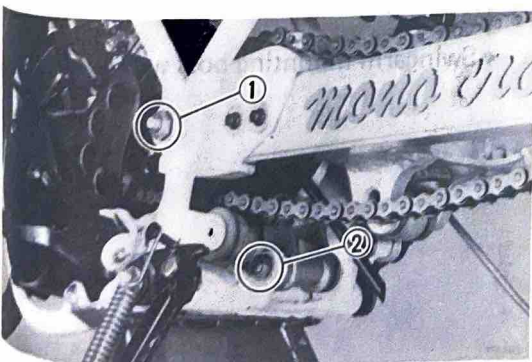
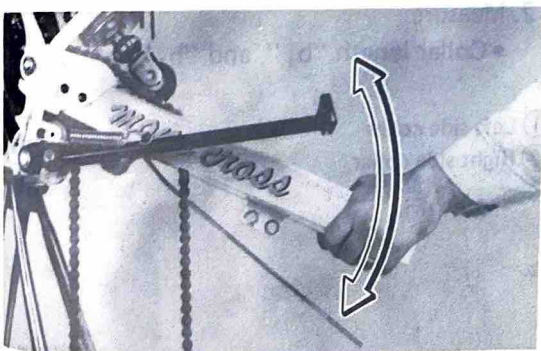
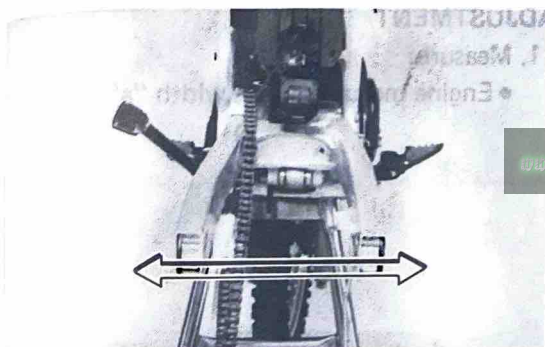
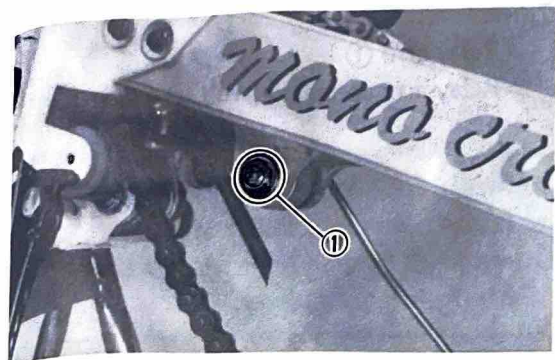
Side Play (At End of Swingarm):
1.0 mm (0.04 in)

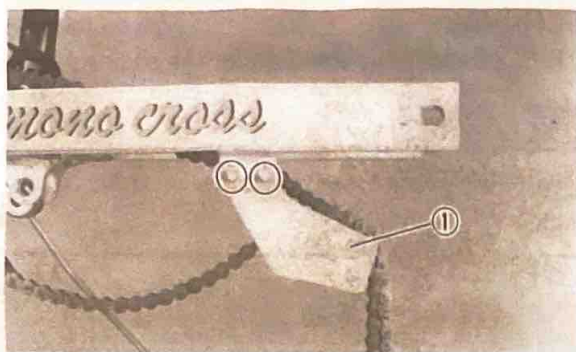
4. Check:

- Swingarm (Vertical movement)
Tightness/Binding/Rough Spots → Replace bearings.
Move swingarm up and down.

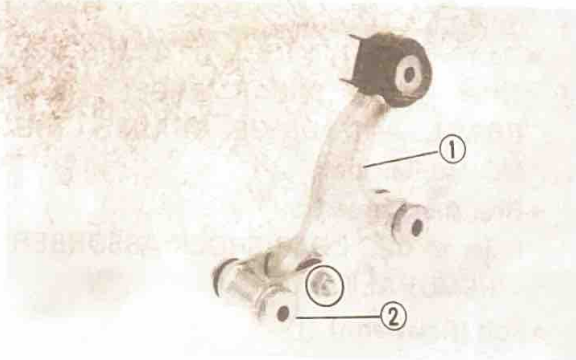
5. Remove:

- Pivot shaft ①
- Bolt (Relay arm connecting rod) ②

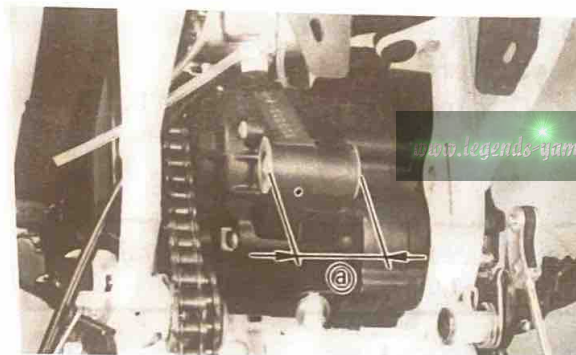




6. Remove:
- Chain guide ①
 - Swingarm assembly



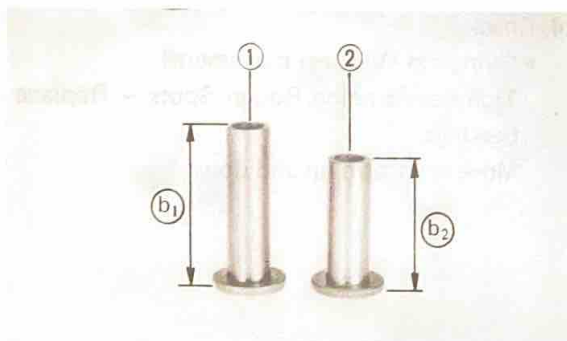
7. Remove:
- Relay arm ①
 - Relay arm connecting rod ②



ADJUSTMENT

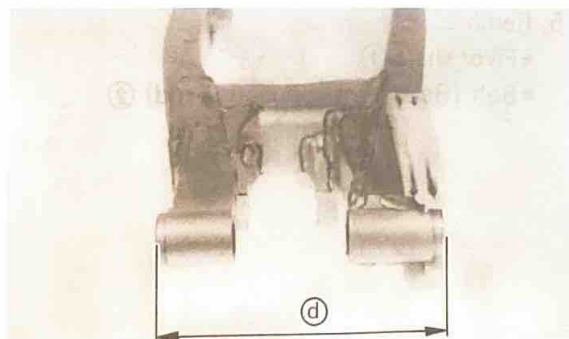
1. Measure:
- Engine mounting boss width "a"

5

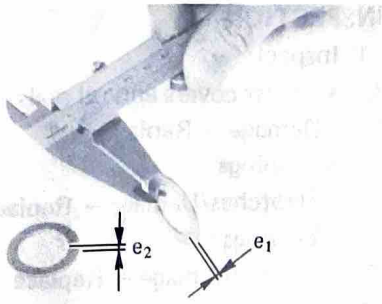


2. Measure:
- Collar length "b₁", and "b₂"

- ① Left side collar
- ② Right side collar



3. Measure:
- Swingarm mounting boss width "d"



4. Measure:

- Plain washer thickness "e₁" and e₂"

5. Calculate:

- Swingarm side clearance "C"

Out of specification → Adjust side clearance using shim.

By using formula given below.

$$C = (a + b_1 + b_2) - (d + e_1 + e_2)$$



Side Clearance "C":

0.2 ~ 0.4 mm (0.008 ~ 0.016 in)

Example:

- If the "a", "b₁" and "b₂" are below.

a 52.7 mm (2.07 in)

b₁ 48.5 mm (1.91 in)

b₂ 59.5 mm (2.34 in)

- If the "d", "e₁" and "e₂" are below.

d 157.0 mm (6.18 in)

e₁, e₂ ... 1.5 mm (0.06 in)

Side clearance "C"

$$= (52.7 + 48.5 + 59.5) - (157.0 + 1.5 + 1.5)$$

$$= 0.7 \text{ mm}$$

Then, install the one shim.

NOTE:

If only one shim is used, install it on the right side. Two shims must be installed both sides.



Shim Thickness:

0.3 mm (0.012in)



INSPECTION

1. Inspect:

- Thrust covers and oil seals
Damage → Replace.
- Bushings
Scratches/Damage → Replace.
- Bearings
Pitting/Damage → Replace.

2. Install:

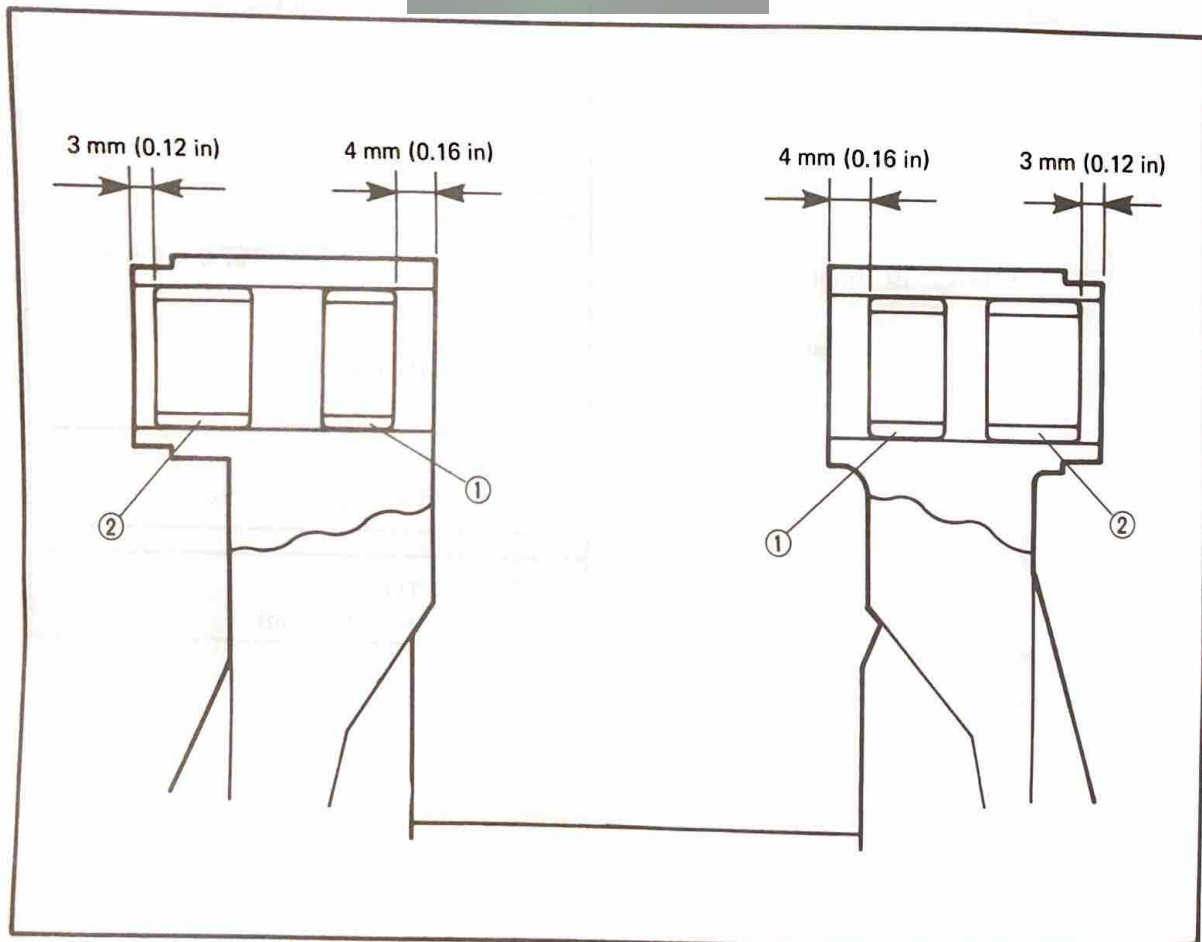
- Bushings (New) ①
- Bearings (New) ②

NOTE:

When installing the new bushings and bearings, note attention to the following points;

- Bushings and bearings should be exactly located as shown in the illustration.
- Grease them liberally with lithium base water-proof wheel bearing grease.

www.legends-yamaha-enduros.com



INSTALLATION

Reverse the "REMOVAL" procedure. Note the following points.

1. Apply molybdenum disulfide grease to the portions of the swingarm.
 - Bushing:
Coat all inside surface of bushings with grease.
 - Oil seal:
Fill the lip portion of oil seals with grease.
 - Thrust cover:
Fill inside of thrust cover with grease.
 - Pivot shaft:
Coat outside surface of shaft with grease.

NOTE: _____
Wipe off any excess grease.

2. Tighten:
 - Nuts



**Relay Arm and Relay Arm
Connecting Rod:**
32 Nm (3.2 m·kg, 23 ft·lb)

Swingarm and Relay Arm:
32 Nm (3.2 m·kg, 23 ft·lb)

**Relay Arm Connecting Rod and
Frame:**
32 Nm (3.2 m·kg, 23 ft·lb)

Pivot Shaft:
53 Nm (5.3 m·kg, 38 ft·lb)

3. Install:

- Rear shock absorber
Refer to the "REAR SHOCK ABSORBER – INSTALLATION" section.
- Rear wheel
Refer to the "REAR WHEEL, REAR BRAKE AND DRIVE CHAIN – INSTALLATION" section.

CHAPTER 6. ELECTRICAL

YZ80T CIRCUIT DIAGRAM 6-1

ELECTRICAL COMPONENTS 6-2

IGNITION SYSTEM 6-3

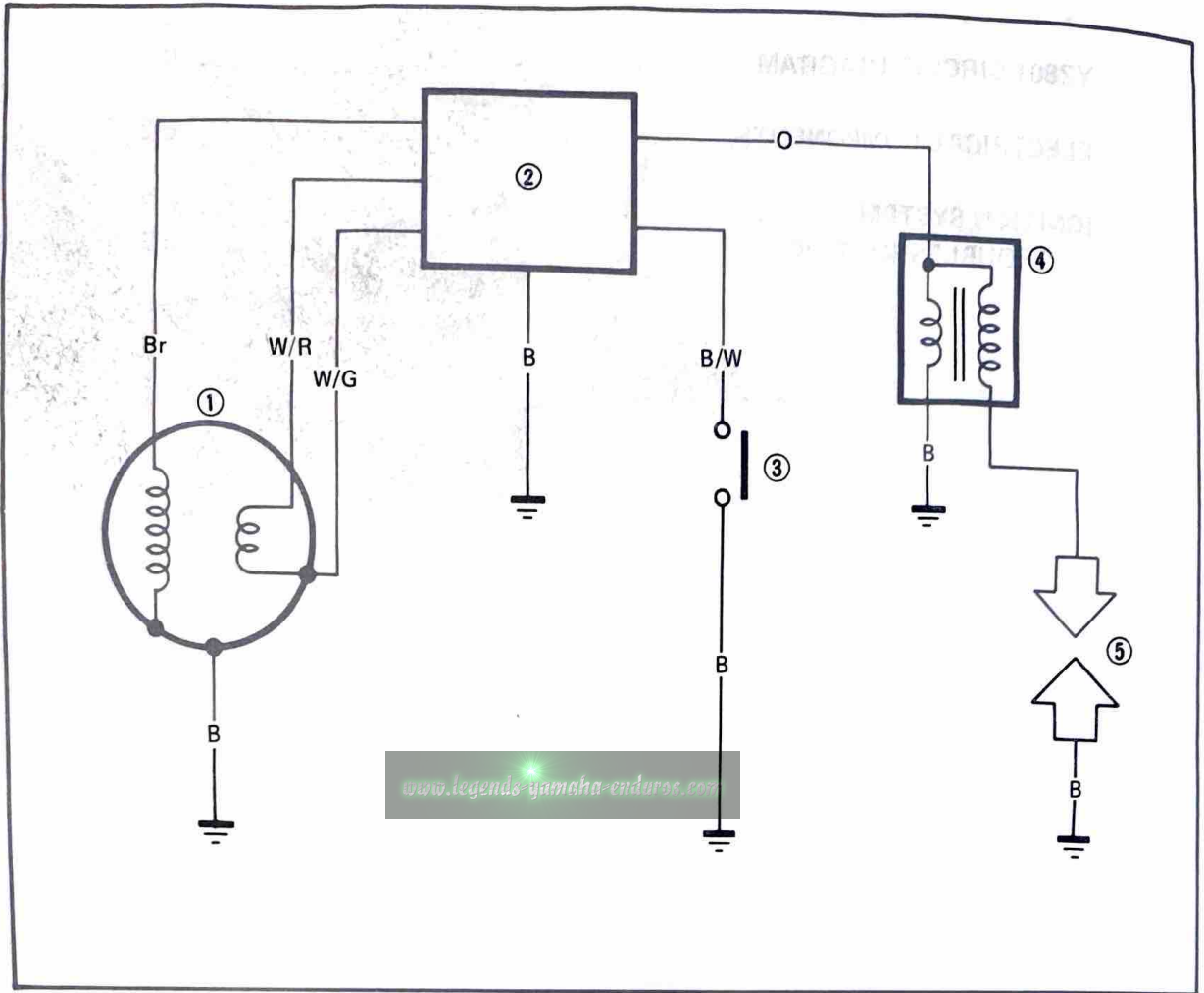
 TROUBLESHOOTING 6-3

www.legends-yamaha-enduros.com



ELECTRICAL

YZ80T CIRCUIT DIAGRAM



- ① CDI magneto
- ② CDI unit
- ③ "ENGINE STOP" button
- ④ Ignition coil
- ⑤ Spark plug

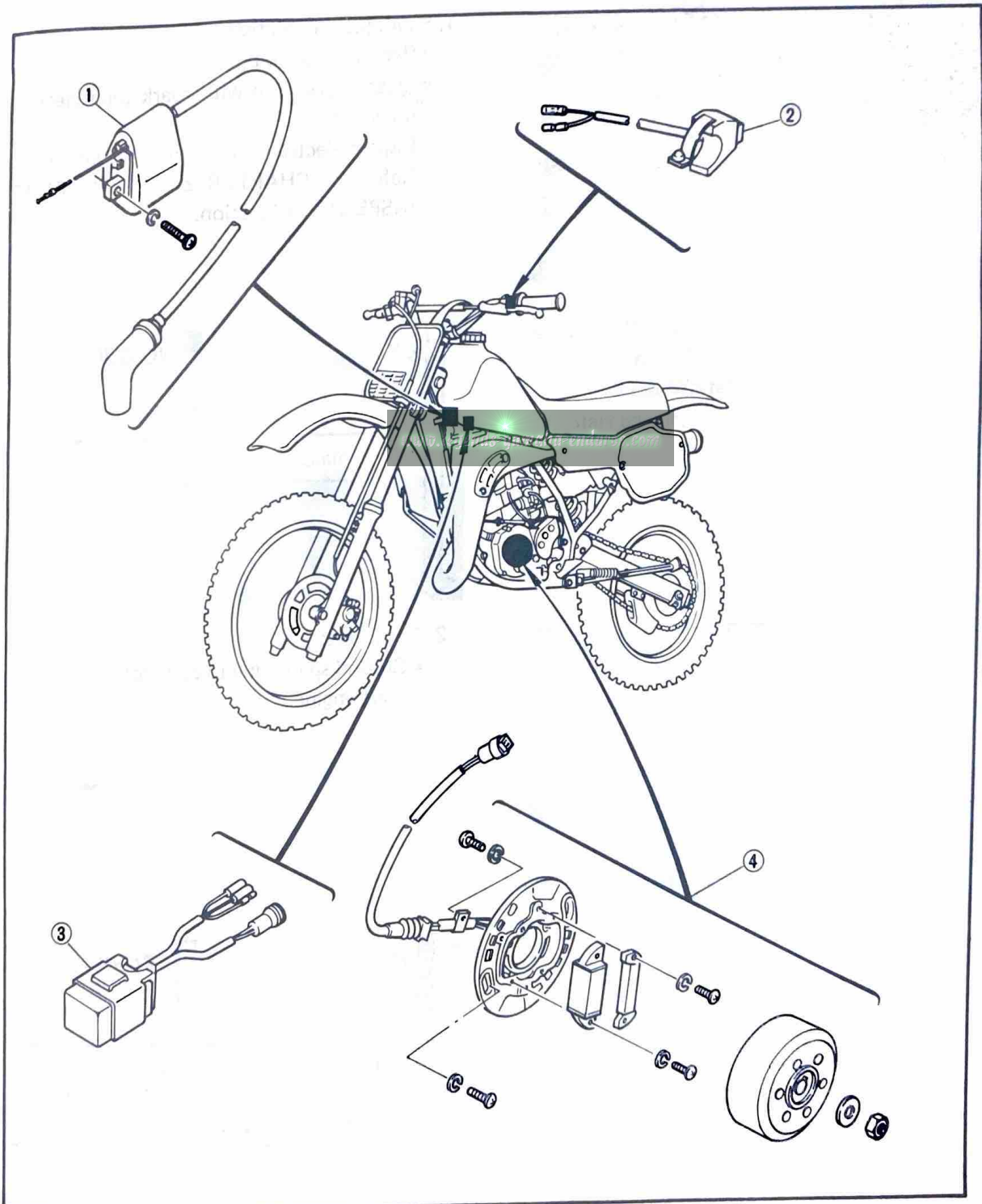
COLOR CODE

- Br. Brown
- O Orange
- B Black
- B/W Black/White
- W/G White/Green
- W/R White/Red



ELECTRICAL COMPONENTS

- ① Ignition coil
- ② "ENGINE STOP" button
- ③ CDI unit
- ④ CDI magneto





IGNITION SYSTEM

TROUBLESHOOTING

IF IGNITION SYSTEM SHOULD BECOME INOPERATIVE (NO SPARK OR INTERMITTENT SPARK).

1. Spark plug inspection:

- Remove spark plug.
- Clean spark plug with spark plug cleaner, if necessary.
- Inspect electrode, insulator and plug gap. Refer to "CHAPTER 2 – SPARK PLUG INSPECTION" section.

OK

NO GOOD

Replace or regap spark plug.

2. Spark test:

- Ground spark plug to cylinder.
- Start engine.

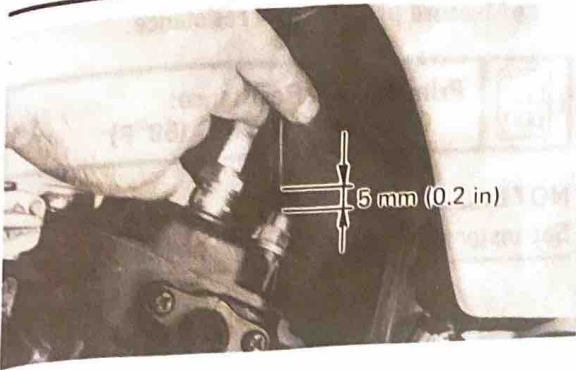
NO SPARK

SPARK

Check ignition timing. Refer to "CHAPTER 2 – IGNITION TIMING ADJUSTMENT" section.

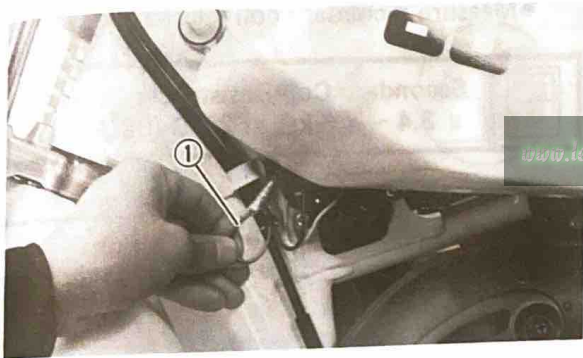
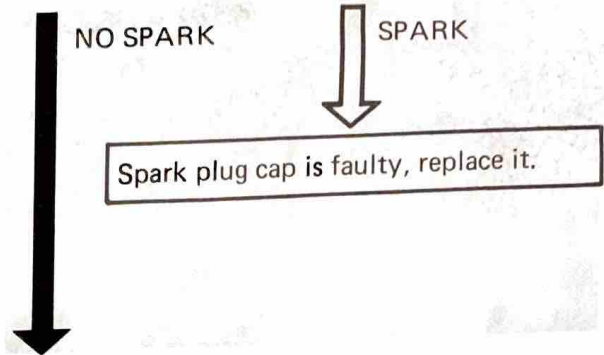


6



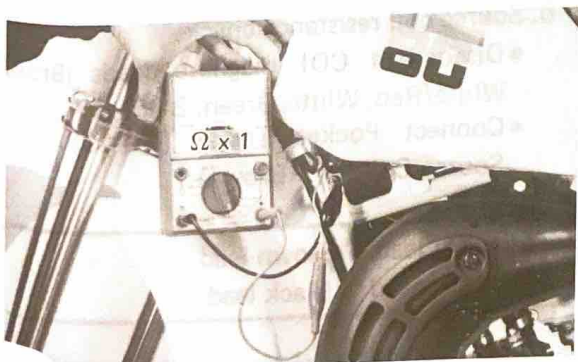
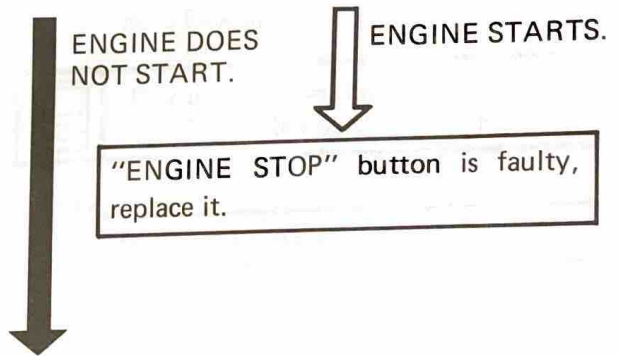
3. Spark gap test

- Remove Spark plug cap.
- Hold spark plug lead 5 mm (0.2 in) from cylinder head.
- Start engine.



4. "ENGINE STOP" button conduct check:

- Disconnect "ENGINE STOP" button lead ① (Black/White).
- Start engine.



5. Ignition coil resistance check:

- Disconnect ignition coil lead (Orange) and spark plug lead.
- Connect Pocket Tester (YU-03112) to ignition coil lead.

Tester (+) lead → Orange lead
 Tester (-) lead → Ignition coil base

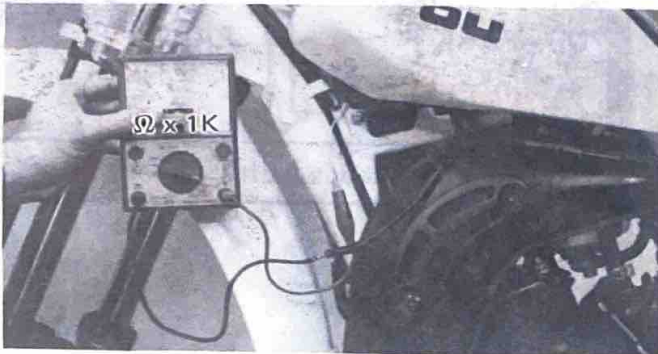


- Measure primary coil resistance.



Primary Coil Resistance:
0.2 ~ 0.3Ω at 20°C (68°F)

NOTE:
Set tester selector to "Ω x 1" position.



- Connect Pocket Tester (YU-03112) to ignition coil lead and spark plug lead.

Tester (+) lead → Orange lead
Tester (-) lead → Spark plug lead

- Measure secondary coil resistance.



Secondary Coil Resistance:
3.4 ~ 4.6 kΩ at 20°C (68°F)

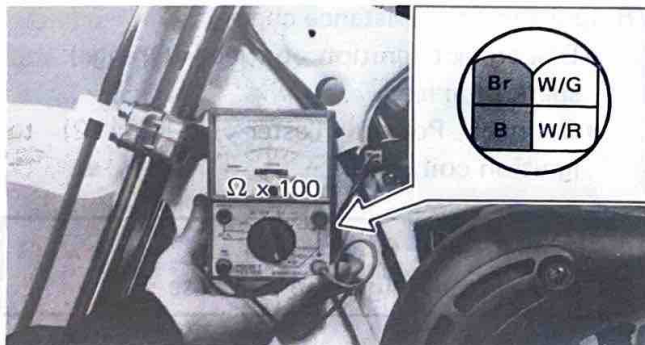
NOTE:
Set tester selector to "Ω x 1k" position.

www.legends-yamaha-enthusiast.com

BOTH RESISTANCES MEET SPECIFICATIONS **OUT OF SPECIFICATION**

Ignition coil is faulty, replace it.

6



6. Source coil resistance check:

- Disconnect CDI magneto leads (Brown, White/Red, White/Green, Black).
- Connect Pocket Tester (YU-03112) to Source Coil lead (Brown).

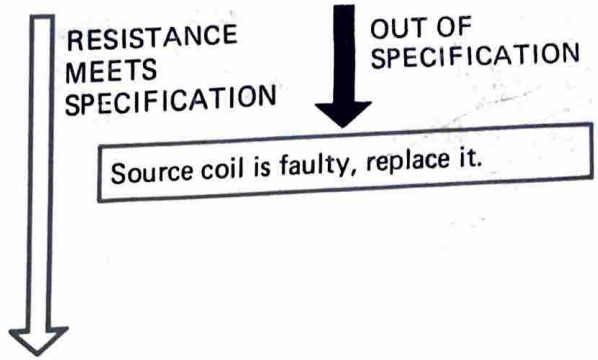
Tester (+) lead → Brown lead
Tester (-) lead → Black lead

- Measure source coil resistance.



Source Coil Resistance:
454.5 ~ 555.5Ω at 20°C (68°F)

NOTE:
Set tester selector to "Ω x 100" position.



7. Pick-up coil resistance check:

- Disconnect CDI magneto leads (Brown, White/Red, White/Green, Black).
- Connect Pocket Tester (YU-03112) to Pick-up coil leads (White/Red, White/Green).

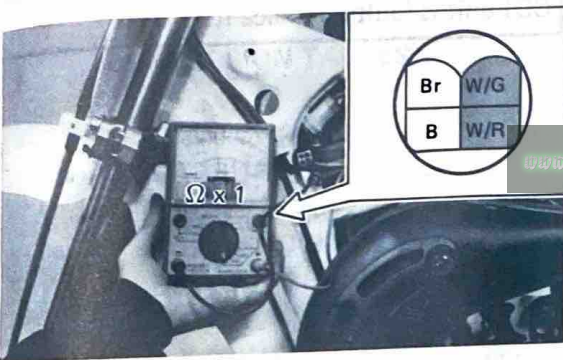
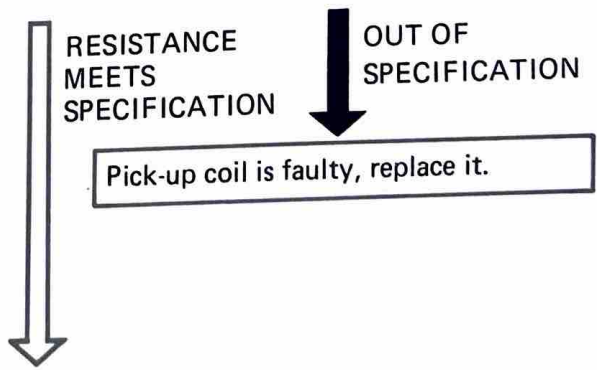
Tester (+) lead → White/Red lead
Tester (-) lead → White/Green lead

- Measure Pick-up coil resistance.



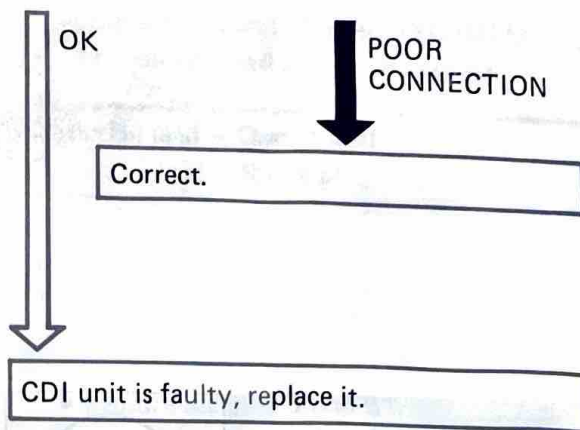
Pick-up Coil Resistance:
9.4 ~ 11.5Ω at 20°C (68°F)

NOTE:
Set tester selector to "Ω x 1" position.





8. Check entire ignition system for connections.
Refer to "WIRING DIAGRAM" section.



www.legends-yamaha-enduros.com



CHAPTER 7. APPENDICES

TROUBLESHOOTING GUIDE	7-1
ENGINE IS HARD TO START OR DOES NOT START	7-1
POOR HIGH SPEED PERFORMANCE	7-2
OVERHEAT	7-3
LOW COOLANT LEVEL	7-3
TRANSMISSION AND SHIFTER	7-4
CLUTCH	7-4
CHASSIS	7-5
SPECIFICATIONS	7-6
GENERAL SPECIFICATIONS	7-6
MAINTENANCE SPECIFICATIONS	7-8
GENERAL TORQUE SPECIFICATIONS	7-15
DEFINITION OF UNITS	7-15
CONVERSION TABLES	7-16
SETTING CHARTS	7-17
CARBURETOR	7-17
FRONT FORK	7-17
REAR SHOCK ABSORBER SPRING	7-18
DRIVE SPROCKET AND DRIVEN SPROCKET	7-18
CABLE ROUTING	7-19
YZ80T WIRING DIAGRAM	7-19



APPENDICES

TROUBLESHOOTING GUIDE

ENGINE IS HARD TO START OR DOES NOT START

Ignition System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Spark plug is wet. Ignition coil is faulty. CDI unit is faulty. CDI magneto is faulty. (Pulser coil, source coil) Ignition timing is incorrect. Wire is broken, shorted or disconnected. Engine stop button is shorted. 	<ul style="list-style-type: none"> Clean or replace Replace Replace Replace Adjust Repair, replace or connect Repair or replace
Compression System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Piston rings are sticking or worn. Cylinder or piston is worn or scratched. Compression leaks passing cylinder head gasket. (Head is distorted.) Crankshaft side oil seal is faulty. Air leaks through crankcase sealing surfaces. 	<ul style="list-style-type: none"> Replace Repair or replace Replace (or repair) Replace Repair
Air/Fuel System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Carburetor pilot jet is clogged. Fuel cock or pipe is clogged. Float valve is faulty. (Float height is too high or too low.) Reed valve is broken or deformed. Fuel tank filler cap or carburetor breather pipe is clogged. Air screw is improperly adjusted. Fuel is deteriorated. Oil-gas mixing ratio is incorrect. Air leaks through carburetor joints. 	<ul style="list-style-type: none"> Clean Clean Replace (remove gasoline from crankcase) Replace Clean Adjust Replace Replace Retighten or replace gasket

POOR HIGH SPEED PERFORMANCE

Ignition System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Spark plug is dirty or plug gap is too narrow. CDI unit is faulty. CDI magneto is faulty. Ignition coil is faulty. Ignition timing is incorrect. Loose wire connection. 	<ul style="list-style-type: none"> Clean, repair or replace Replace Replace Replace Adjust Repair
Compression System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Piston rings are sticking or worn. Cylinder or piston is worn or scratched. Compression leakage through crankcase sealing surfaces or crankshaft side oil seal. Carbon deposits in combustion chamber (Piston, Cylinder head.) 	<ul style="list-style-type: none"> Replace Repair or replace Repair or replace Decarbonize
Air/Fuel System	
Possible Cause	Remedy
<ol style="list-style-type: none"> Clogged carburetor jets. Improperly adjusted main jet. (High speed) Improperly adjusted jet needle. (Medium speed) Incorrect fuel level Dirty or clogged air cleaner element Clogged fuel tank filler cap or carburetor breather pipe. Clogged fuel cock or kinked fuel pipe. Deteriorated fuel. Improper oil-gas mixing ratio. Cracked or broken exhaust pipe. (Leakage or exhaust gases.) 	<ul style="list-style-type: none"> Clean Adjust Adjust Adjust Clean Clean Clean or repair Replace Replace Replace



OVERHEAT

Possible Cause	Remedy
<ol style="list-style-type: none"> 1. Incorrect air-fuel mixture. 2. Air leaks through carburetor joint. 3. Incorrect ignition timing. 4. Carbon builds up in cylinder head or on piston head. 5. Improper spark plug heat range (too hot) 6. Fuel is deteriorated or oil-gas mixing ratio is incorrect. 7. Coolant of inferior quality. 8. Coolant level is low. 9. Water pump is faulty. 10. Cooling passage is clogged. 11. Radiator is clogged. 	<ul style="list-style-type: none"> ● Adjust ● Repair or replace ● Adjust ● Decarbonize ● Replace ● Replace ● Replace with specified type ● Add up to specified line ● Repair or replace ● Clean passage ● Clean radiator

LOW COOLANT LEVEL

Possible Cause	Remedy
<ol style="list-style-type: none"> 1. Radiator is leaky. 2. Hose is damaged or joint is loose. 3. Water pump cover is leaky. 	<ul style="list-style-type: none"> ● Repair or replace ● Replace hose or retighten joint ● Repair or replace

www.legends-yamaha-enduros.com



TRANSMISSION AND SHIFTER

Trouble	Possible Cause	Remedy
Gears slip off	<ol style="list-style-type: none"> 1. Gear dogs are worn. 2. Shift forks are bent. (burnt or worn) 3. Shift cam stopper spring is fatigued. 	<ul style="list-style-type: none"> • Replace • Replace • Replace
Gear shifts skipping over the next.	<ol style="list-style-type: none"> 1. Shift cam stopper spring is fatigued. 2. Shift forks are bent. (burnt or worn) 	<ul style="list-style-type: none"> • Replace • Replace
Gear does not select	<ol style="list-style-type: none"> 1. Shift cam is worn. (broken) 2. Change shaft is broken. 3. Shift arm spring is broken. 4. Gears are broken. 	<ul style="list-style-type: none"> • Replace • Replace • Replace • Removal (Replace)
Shift pedal does not return.	<ol style="list-style-type: none"> 1. Change return spring is broken. 2. Change shaft bent. 	<ul style="list-style-type: none"> • Replace • Replace

CLUTCH

Trouble	Possible Cause	Remedy
Clutch slips	<ol style="list-style-type: none"> 1. Friction plate is worn. 2. Clutch plate is worn. 3. Clutch spring is fatigued. 4. Pressure plate is deformed. 5. Clutch adjustment is incorrect. 6. Match marks of clutch boss and pressure plate does not aligned. 	<ul style="list-style-type: none"> • Replace • Replace • Replace • Replace • Adjust • Reassemble
Clutch drags	<ol style="list-style-type: none"> 1. Clutch plate is warped. 2. Clutch locknut is loosen. 3. Friction plate is broken. 4. Clutch play is too much. 5. Oil viscosity is incorrect. 	<ul style="list-style-type: none"> • Replace • Replace • Replace • Adjust • Replace

CHASSIS

Steering head is loose		
Possible Cause		Remedy
<ol style="list-style-type: none"> 1. Roller is worn. 2. Steering lock nut is loose. 		<ul style="list-style-type: none"> ● Replace ● Retighten
Wheels have excessive run-out		
Possible Cause		Remedy
<ol style="list-style-type: none"> 1. Bearing is worn. 2. Rim has dent. 3. Spokes are loose (or broken). 4. Axle nut is loose. 		<ul style="list-style-type: none"> ● Replace ● Repair or replace ● Retighten or replace ● Retighten
Brakes		
Trouble	Possible Cause	Remedy
Faulty	<ol style="list-style-type: none"> 1. Brake pad or shoes are worn. 2. Brake is improperly adjusted. 3. Brake drum contains water. 4. Brake disc, pad, or lining are greasy. 	<ul style="list-style-type: none"> ● Replace ● Adjust ● Clean ● Degrease or replace
Not return smoothly	<ol style="list-style-type: none"> 1. Wire is starved for oil. 2. Camshaft is starved for grease. 3. Return spring or brake shoe spring is broken. 4. Brake pedal axle is starved for grease. 	<ul style="list-style-type: none"> ● Grease or replace ● Grease ● Replace ● Grease
Frame and Swingarm		
Possible Cause		Remedy
<ol style="list-style-type: none"> 1. Frame is cracked. 2. Rear arm is bent 3. Rear arm is cracked. 4. Bushing is worn. 5. Bushing lacks oil. 		<ul style="list-style-type: none"> ● Weld, reinforced or replace ● Repair or replace ● Replace ● Replace ● Lubricate



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YZ80T
Model Code Number	2HF
Vehicle Identification Number	JYA2HF00 * HA000101
Engine Starting Number	2HF-000101
Dimensions:	
Overall Length	1,795 mm (70.7 in)
Overall Width	765 mm (30.1 in)
Overall Height	1,060 mm (41.7 in)
Seat Height	800 mm (31.5 in)
Wheelbase	1,235 mm (48.6 in)
Minimum Ground Clearance	290 mm (11.4 in)
Basic Weight: Dry Weight	61.2 kg (135 lb)
Engine:	
Engine Type	Liquid cooled, 2-stroke, gasoline, torque induction
Cylinder Arrangement	Single cylinder, Forward inclined
Displacement	82.5 cm ³
Bore x Stroke	48.0 x 45.6 mm (1.89 x 1.80 in)
Compression Ratio	8.6 : 1
Starting System	Kick starter
Lubrication System	Premix
Oil Type or Grade: Engine Oil (Premix Ratio)	Yamalube "R" (24 : 1) Castrol R30, A545, A747 (20 : 1) Yamalube "4" or SEA 10W30 type SE motor oil
Transmission Oil	
Oil Capacity:	
Transmission Oil	0.65 L (0.57 Imp qt, 0.69 US qt)
Periodic Oil Change Total Amount	0.70 L (0.62 Imp qt, 0.74 US qt)
Radiator Capacity: (Including All Routes)	0.49 L (0.43 Imp qt, 0.52 US qt)
Air Filter	Wet type element
Fuel:	
Type	Premium gasoline
Tank Capacity	5 L (1.1 Imp gal, 1.3 US gal)
Carburetor: Type/Manufacturer	VM26SS/MIKUNI
Spark Plug: Type/Manufacturer Gap	N-84/CHAMPION 0.5 ~ 0.6 mm (0.020 ~ 0.024 in)
Clutch Type	Wet, multiple-disc
Transmission:	
Primary Reduction System	Gear
Primary Reduction Ratio	65/18 (3.611)
Secondary Reduction System	Chain drive
Secondary Reduction Ratio	46/14 (3.285)



Model	YZ80T
Transmission Type Operation Gear Ratio 1st 2nd 3rd 4th 5th 6th	Constant mesh, 6-speed Left foot operation 36/13 (2.769) 33/16 (2.062) 31/19 (1.631) 22/16 (1.375) 27/22 (1.227) 26/23 (1.130)
Chassis: Frame Type Caster Angle Trail	Steel tube, Semi double cradle 26° 80 mm (3.15 in)
Tire: Type Size (Front)/Manufacturer Size (Rear)/Manufacture	With tube 70/100-17 40M/BRIDGESTON 90/100-14 49M/BRIDGESTON
Tire Pressure (Cold tire): Front Rear	98 kPa (1.0 kg/cm ² , 14 psi) 98 kPa (1.0 kg/cm ² , 14 psi)
Brake: Front Brake Type Operation Rear Brake Type Operation	Disc brake (Single) Right hand operation Drum brake Right foot operation
Suspension: Front Suspension Rear Suspension	Telescopic fork Swing arm (Monocross suspension)
Shock Absorber: Front Shock Absorber Rear Shock Absorber	Coil-Air spring, Oil damper Gas-Coil spring, Oil damper
Wheel Travel: Front Wheel Travel Rear Wheel Travel	255 mm (10.0 in) 260 mm (10.2 in)
Electrical: Ignition System Generator System	CDI Flywheel magneto

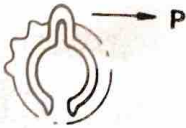


MAINTENANCE SPECIFICATIONS

Engine	Model	YZ80T
Cylinder Head: Warp Limit	<p>*</p>	<p>< 0.03 mm (0.0012 in) > * Lines indicate straightedge measurement.</p>
Cylinder: Bore Size Taper Limit Out of Round Limit		<p>48.0 mm (1.89 in) < 0.05 mm (0.002 in) > < 0.01 mm (0.0004 in) ></p>
Piston: Piston Size/Measuring Point *		<p>47.94 ~ 48.00 mm (1.887 ~ 1.890 in)/ 15 mm (0.6 in)</p>
Piston Clearance		<p>0.060 ~ 0.065 mm (0.0024 ~ 0.0026 in)</p>
Oversize 1st 2nd Piston Offset		<p>48.25 mm (1.900 in) 48.50 mm (1.900 in) 1.5 mm (0.06 in)</p>
Piston Ring: Sectional Sketch		<p>Plain B = 0.8 mm (0.031 in) T = 2.0 mm (0.079 in)</p>
End Gap (Installed) Side Clearance (Installed)		<p>0.30 ~ 0.45 mm (0.012 ~ 0.018 in) 0.03 ~ 0.07 mm (0.001 ~ 0.003 in)</p>
Crankshaft:		<p>44.90 ~ 44.95 mm (1.768 ~ 1.770 in) 0.03 mm (0.0012 in) 0.2 ~ 0.7 mm (0.008 ~ 0.028 in) 0.5 ~ 1.2 mm (0.020 ~ 0.047 in)</p>
Crank Width "A" Runout Limit "C" Connecting Rod Big End Side Clearance "D" Small End Free Play Limit "F"		
Clutch: Friction Plate Thickness/Quantity < Wear Limit > Clutch Plate Thickness/Quantity < Wear Limit > Clutch Spring Free Length/Quantity < Clutch Spring Minimum Length >		<p>3.0 mm (0.12 in) x 6 < 2.7 mm (0.11 in) > 1.6 mm (0.063 in) x 5 < 0.05 mm (0.002 in) > 33.0 mm (1.30 in) x 4 < 31.0 mm (1.22 in) ></p>



Model	YZ80T
Clutch Housing Thrust Clearance Clutch Housing Radial Clearance Primary Reduction Gear Backlash Tolerance Clutch Release Method < Push Rod Bending Limit >	0.10 ~ 0.35 mm (0.004 ~ 0.014 in) 0.022 ~ 0.051 mm (0.001 ~ 0.002 in) 93 ~ 95 Inner push, cam push < 0.15 mm (0.006 in) >
Shifter: Shifting Type	Cam drum, Guide bar
Kick Starter Type: Kick Clip Friction Force < Min. ~ Max. >	Kick and mesh type P = 1.0 kg (2.2 lb) < 0.8 ~ 1.2 kg (1.8 ~ 2.6 lb) >
Air Filter Oil Grade (Oiled Filter)	Foam-Air-Filter oil or SAE 10W30 SE
Carburetor: Type/Manufacturer/Quantity I.D. Mark Main Jet (M.J.) Main Air Jet (M.A.J.) Jet Needle-clip Position (J.N.) Needle Jet (N.J.) Cutaway (C.A.) Pilot Jet (P.J.) Pilot Air Screw (P.A.S.) Valve Seat Size (V.S.) Starter Jet (G.S.) Float Height (F.H.)	VM26SS/MIKUNI/1 1LR00 #280 φ1.0 5H22-3 Q-2 3.0 #35 1 and 3/4 φ2.5 #40 20 ~ 22 mm (0.79 ~ 0.87 in)
Reed Valve: Thickness * Valve Stopper Height Valve Bending Limit	0.42 mm (0.016 in) 8.5 mm (0.33 in) 0.3 mm (0.012 in)
Cooling: Radiator Core Size - Width - Height - Thickness Radiator Cap Opening Pressure Water Pump Type Reduction Ratio	97.5 mm (3.84 in) 280 mm (11.02 in) 32 mm (1.26 in) 93 ~ 122 kPa (0.95 ~ 1.25 kg/cm ² , 14 ~ 18 psi) Single-Suction Centrifugal Pump 25/18 (1.388)





Tightening Torque:

Part to be tightened	Thread size	Q'ty	Torque			Remarks
			Nm	m·kg	ft·lb	
Spark Plug	M14 x 1.25	1	25	2.5	18	
Cylinder Head	M8 x 1.25	4	25	2.5	18	
Drain Bolt (Cylinder)	M6 x 1.0	1	10	1.0	7.2	
Water Pump Housing Cover (Flange Bolt)	M6 x 1.0	1	10	1.0	7.2	
(Panhead Screw)	M6 x 1.0	3	10	1.0	7.2	
Joint	M6 x 1.0	2	10	1.0	7.2	
Carburetor Joint	M6 x 1.0	4	10	1.0	7.2	
Air Filter Case	M6 x 1.0	2	10	1.0	7.2	
YEIS Chamber	M6 x 1.0	1	10	1.0	7.2	
Muffler	M6 x 1.0	2	10	1.0	7.2	
Crankcase	M6 x 1.0	9	10	1.0	7.2	
Crankcase Cover (Right)	M6 x 1.0	3	10	1.0	7.2	
Crankcase Cover (Left)	M6 x 1.0	7	10	1.0	7.2	
Bearing Stopper Plate	M6 x 1.0	2	10	1.0	7.2	Apply LOCTITE®
Drain Plug (Crankcase)	M12 x 1.5	1	20	2.0	14	
Kick Crank	M10 x 1.25	1	35	3.5	25	
Primary Drive Gear	M12 x 1.0	1	68	6.8	49	
Clutch Boss	M10 x 1.0	1	55	5.5	40	
Clutch Pressure Plate	M5 x 0.8	4	6	0.6	4.3	
Stopper Lever	M6 x 1.0	1	14	1.4	10	Apply LOCTITE®
Change Pedal	M6 x 1.0	1	10	1.0	7.2	
CDI Magneto	M12 x 1.25	1	35	3.5	25	



Chassis

Model	YZ80T
Steering System: Steering Bearing Type No./Size of Steel Balls Upper	Ball and Taper Roller Bearing 22 pcs./ 3/16 in
Front Suspension: Front Fork Travel Fork Spring Free Length < Limit > Spring Rate/Stroke Optional Spring Oil Capacity Oil Level Oil Grade Enclosed Air Pressure Standard < Minimum ~ Maximum >	255 mm (10.04 in) 461 mm (18.15 in) < 457 mm (18.00 in) > $K_1 = 2.26 \text{ N/mm (0.23 kg/mm, 12.67 lb/in)}/$ 0.0 ~ 267 mm (0.0 ~ 10.51 in) Yes 272 cm ³ (9.6 Imp oz, 9.2 US oz) 157 mm (6.18 in) (From top of inner tube fully compressed with spring) Yamaha Fork Oil 10wt or equivalent Zero kPa (Zero kg/cm ² , Zero psi) < Zero ~ 117.7 kPa (Zero ~ 1.2 kg/cm ² , Zero ~ 17 psi) >
Rear Suspension: Shock Absorber Travel Spring Free Length Fitting Length Spring Rate/Stroke Optional Spring Enclosed Gas Pressure Standard < Minimum ~ Maximum >	90 mm (3.54 in) 233 mm (9.17 in) 211 mm (8.31 in) $K_1 = 43.15 \text{ N/mm (4.4 kg/mm, 242 lb/in)}/$ Zero ~ 115 mm (Zero ~ 4.53 in) Yes 1,177 kPa (12 kg/cm ² , 170 psi) < 1,078 ~ 1,373 kPa (11 ~ 14 kg/cm ² , 156 ~ 200 psi) >
Wheel: Front Wheel Type Rear Wheel Type Front Rim Size/Material Rear Rim Size/Material Rim Runout Limit < Vertical > < Lateral >	Spoke Wheel Spoke Wheel 1.40 x 17/Aluminum 1.64 x 14/Aluminum < 2.0 mm (0.08 in) > < 2.0 mm (0.08 in) >
Rear Arm: Swing Arm Free Play Limit < End > < Side Clearance >	< 1.0 mm (0.04 in) > < 0.2 ~ 0.4 mm (0.008 ~ 0.006 in) >
Drive Chain: Type/Manufacturer Number of Links Chain Free Play	DID428/DAIDO 111L + Joint 15 ~ 20 mm (0.6 ~ 0.8 in)



Model	YZ80T
Disc Brake (Front): Type Outside Dia. x Thickness < Limit > Pad Thickness < Limit > Master Cylinder Inside Dia. Caliper Cylinder Inside Dia. Brake Fluid Type	Single disc 190 x 3.0 mm (7.48 x 0.12 in) < 2.5 mm (0.10 in) > 4.0 mm (0.16 in) < 0.8 mm (0.03 in) > 11.1 mm (0.44 in) 22.2 mm (0.87 in) DOT #3
Drum Brake (Rear): Type Drum Inside Dia. < Limit > Lining Thickness < Limit > Shoe Spring Free Length	Leading, trailing 95 mm (3.74 in) < 96 mm (3.78 in) > 4 mm (0.2 in) < 2 mm (0.08 in) > 32.7 mm (1.29 in)
Brake Lever & Brake Pedal: Brake Lever Free Play (at lever end) Brake Pedal Free Play Brake Pedal Position	10 ~ 20 mm (0.4 ~ 0.8 in) 20 ~ 30 mm (0.8 ~ 1.2 in) 10 mm (0.4 in) (Vertical height below footrest top.)
Clutch Lever Free Play	2 ~ 3 mm (0.08 ~ 0.12 in)



Part to be tightened	Thread size	Q'ty	Torque			Remarks
			Nm	m·kg	ft·lb	
Front Wheel Axle	M12 x 1.25	1	74	7.4	53	
Front Fender	M6 x 1.0	4	7	0.7	5.1	
Brake Camshaft Lever	M6 x 1.0	1	10	1.0	7.2	
Steering Stem Bolt	M14 x 1.25	1	59	5.9	43	
Steering Crown and Inner Tube	M8 x 1.25	2	18	1.8	13	
Handlebar Holder	M8 x 1.25	4	27	2.7	19	
Engine Mount						
Front	M8 x 1.25	1	40	4.0	29	
Lower	M8 x 1.25	1	40	4.0	29	
Pivot Shaft	M12 x 1.25	1	53	5.3	38	
Footrest and Frame	M10 x 1.25	1	50	5.0	36	
Rear Wheel Axle	M14 x 1.5	1	85	8.5	61	
Rear Wheel Hub Stud Bolt	M8 x 1.25	6	30	3.0	22	
Driven Sprocket	M8 x 1.25	6	26	2.6	19	
Fuel Tank	M6 x 1.0	4	7	0.7	5.1	
Rear Shock Absorber and Frame	M10 x 1.25	1	32	3.2	23	
Fuel Cock	M6 x 1.0	2	5	0.5	3.6	
Sidestand and Bracket	M8 x 1.25	1	21	2.1	15	
Rear Fender and Frame	M8 x 1.25	2	17	1.7	12	
Sidestand Bracket and Frame	M10 x 1.25	1	48	4.8	35	
Rear Shock Absorber and Relay Arm	M10 x 1.25	1	32	3.2	23	
Swingarm and Relay Arm	M10 x 1.25	1	32	3.2	23	
Connecting Rod and Relay Arm	M10 x 1.25	1	32	3.2	23	
Frame and Connecting Rod	M10 x 1.25	1	32	3.2	23	
Ring Nut (Steering Stem)	M25 x 1.0	1	8	0.8	5.8	
Brake Disc and Wheel Hub	M6 x 1.0	6	7	0.7	5.1	Apply LOCTITE®
Brake Caliper and Front Fork	M8 x 1.25	2	30	3.0	22	
Fuel Tank Stay and Frame	M6 x 1.25	2	7	0.7	5.1	



Electrical

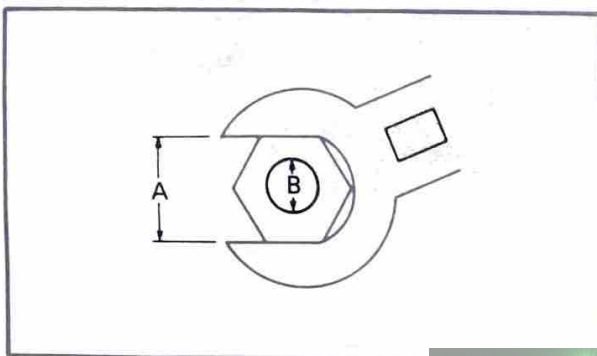
Model	YZ80T
Ignition System: Ignition Timing (B.T.D.C.) Advancer Type	16.5° at 11,500 r/min [1.16 mm (0.064 in)] Electrical
<p style="text-align: center;">www.lorenz.it</p>	
CDI: Magneto-Model/Manufacturer Pickup Coil Resistance (Color) Source Coil Resistance (Color) CDI Unit-Model/Manufacturer	F3T80973/MITSUBISHI 9.4 ~ 11.5Ω at 20°C (68°F) (W/R – W/G) 454.5 ~ 555.5Ω at 20°C (68°F) (Br – B) F8T08273/MITSUBISHI
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	F6T51172/MITSUBISHI 6.0 mm (0.24 in) 0.2 ~ 0.3Ω at 20°C (68°F) 3.4 ~ 4.6 kΩ at 20°C (68°F)
Spark Plug Cap: Type Resistance	Rubber Type 5 kΩ



GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

A (Nut)	B (Bolt)	General torque specifications		
		Nm	m•kg	ft•lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94



A: Distance across flats
B: Outside thread diameter

www.legends-yamaha-enduros.com

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	10 ⁻³ meter	Length
cm	centimeter	10 ⁻² meter	Length
kg	kilogram	10 ³ gram	Weight
N	Newton	1 kg x m/sec ²	Force
Nm	Newton meter	N x m	Torque
m•kg	Meter kilogram	m x kg	Torque
Pa	Pascal	N/m ²	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	—	Volume or Capacity
cm ³	Cubic centimer	—	
r/min	Rotation per minute	—	Engine Speed

CONVERSION TABLES

Metric to inch system		
Known	Multiplier	Result
m·kg	7.233	ft·lb
m·kg	86.80	in·lb
cm·kg	0.0723	ft·lb
cm·kg	0.8680	in·lb
kg	2.205	lb
g	0.03527	oz
km/lit	2.352	mpg
km/hr	0.6214	mph
km	0.6214	mi
m	3.281	ft
m	1.094	yd
cm	0.3937	in
mm	0.03937	in
cc (cm ³)	0.03382	oz (US liq)
cc (cm ³)	0.06102	cu in
lit (liter)	2.1134	pt (US liq)
lit (liter)	1.057	qt (US liq)
lit (liter)	0.2642	gal (US liq)
kg/mm	56.007	lb/in
kg/cm ²	14.2234	psi (lb/in ²)
Centigrade (°C)	9/5 (°C) + 32	Fahrenheit (°F)

Inch to metric system		
Known	Multiplier	Result
ft·lb	0.13826	m·kg
in·lb	0.01152	m·kg
ft·lb	13.831	cm·kg
in·lb	1.1521	cm·kg
lb	0.4535	kg
oz	28.352	g
mpg	0.4252	km/lit
mph	1.609	km/hr
	1.609 mi	km
ft	0.3048	m
yd	0.9141	m
in	2.54	cm
in	25.4	mm
oz (US liq)	29.57	cc (cm ³)
cu in	16.387	cc (cm ³)
pt (US liq)	0.4732	lit (liter)
qt (US liq)	0.9461	lit (liter)
gal (US liq)	3.785	lit (liter)
lb/in	0.017855	kg/mm
psi (lb/in ²)	0.07031	kg/cm ²
Fahrenheit (°C)	5/9 (°F) - 32	Centigrade (°F)

www.legends-yamaha-enduros.com

SETTING CHARTS

NOTE:

For details of the machine setting, refer to the "RACE PREPARATION AND TUNING MANUAL" (90894-13400). It is advisable to take a note of the standard setting data and specified range of adjustment.

CARBURETOR

PART NAME	SIZE	PART NUMBER
MAIN JET	#260	137-14143-52
	#270	137-14143-54
	#280*	137-14143-56
	#290	137-14143-58
	#300	137-14143-60
PILOT JET	#30	260-14142-30
	#35*	260-14142-35
	#40	260-14142-40
NEEDLE JET	Q-0	3R1-14141-50
	Q-2*	3R1-14141-52
	Q-4	3R1-14141-54
CUT-AWAY	2.5	2X6-14112-25
	3.0*	2X6-14112-30
	3.5	2X6-14112-35

www.legends-yamaha-enduros.com

* : Standard

NOTE:

Refer to the "CHAPTER 3 – CARBURETOR AND REED VALVE" section for replacement.

FRONT FORK

SPRING TYPE	SPRING RATE	PART NUMBER	I.D. MARK
STANDARD	0.23 kg/mm	39K-23141-L0	–
HARD	0.25 kg/mm	39K-23141-20	2 slits

SPACER TYPE	PART NUMBER	LENGTH (mm)
FOR STANDARD SPRING	58T-23118-L0	97
FOR HARD SPRING	22N-23118-L0	90

NOTE:

Refer to the "CHAPTER 5 – FRONT FORK" section for replacement.



REAR SHOCK ABSORBER SPRING

TYPE	SPRING RATE	PART NUMBER	I.D. COLOR
STANDARD	4.40 kg/mm	2HF-22212-00	—
SOFT	4.15 kg/mm	2HF-22212-20	Green
HARD	4.65 kg/mm	2HF-22212-30	Black

NOTE:

Refer to the "CHAPTER 5 – REAR SHOCK ABSORBER" section for replacement.

DRIVE SPROCKET AND DRIVEN SPROCKET

PART NAME	SIZE	PART NUMBER
DRIVE SPROCKET	12T	174-17461-20
	13T	174-17461-30
	14T *	174-17461-40
	15T	174-17461-50
DRIVEN SPROCKET	44T	39K-25444-00
	46T *	39K-25446-00
	48T	39K-25448-00
	50T	39K-25450-00
CHAIN	111L + joint	94580-24112
CHAIN JOINT		94680-24001

* : Standard

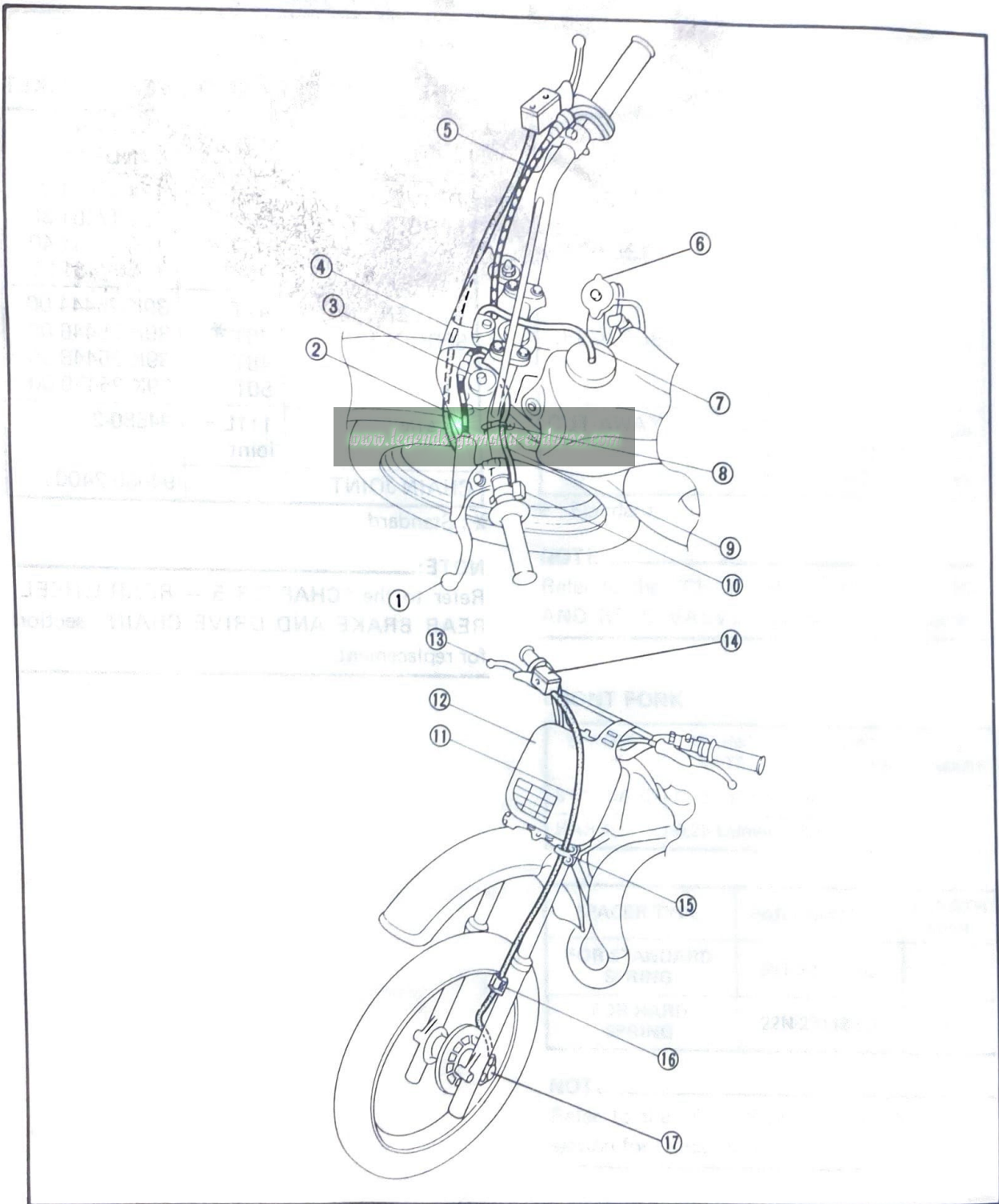
NOTE:

Refer to the "CHAPTER 5 – REAR WHEEL, REAR BRAKE AND DRIVE CHAIN" section for replacement.



CABLE ROUTING

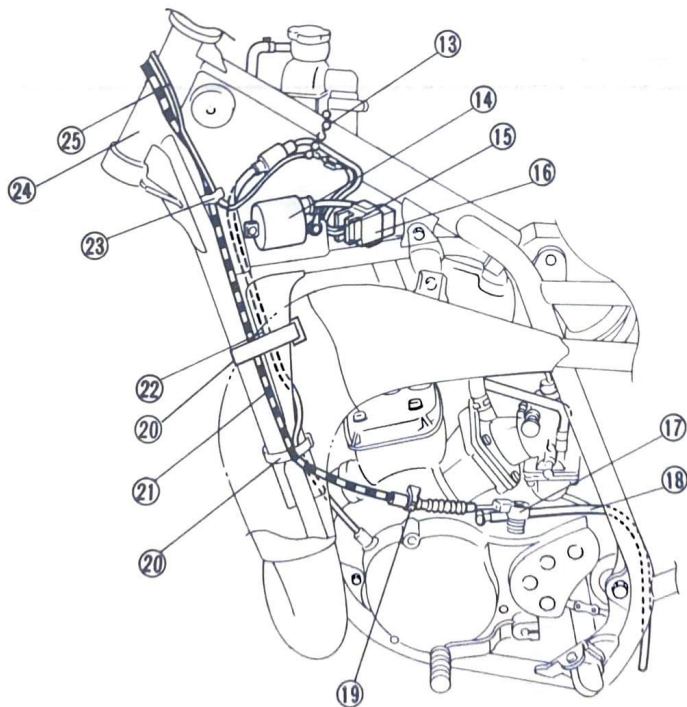
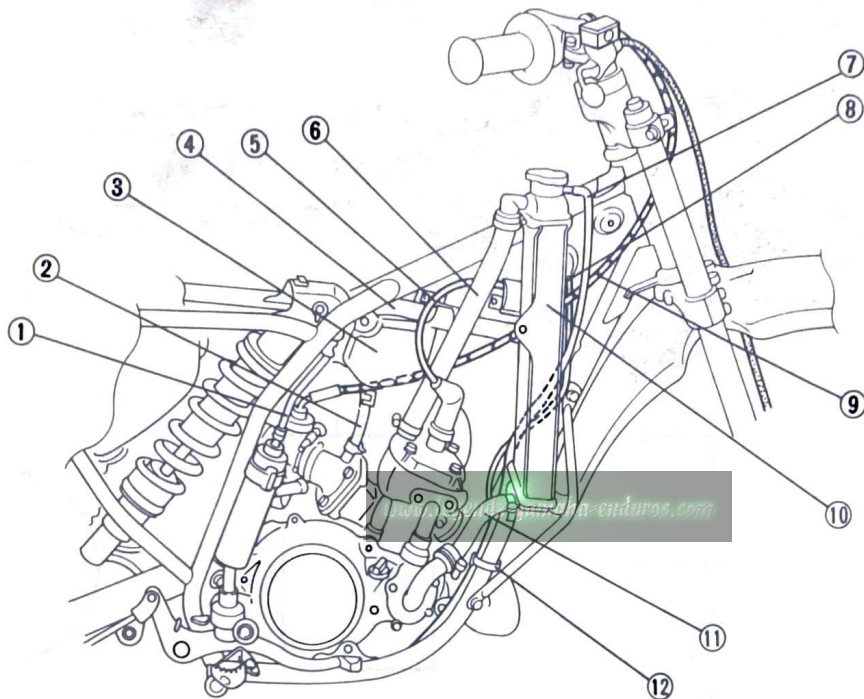
- ① Lever (Left)
- ② Clutch cable
- ③ Left side of inner tube
- ④ Number plate holder
- ⑤ Throttle cable
- ⑥ Radiator cap
- ⑦ Fuel tank breather pipe
- ⑧ Band
- ⑨ Engine stop button lead
- ⑩ Engine stop button
- ⑪ Brake hose
- ⑫ Number plate
- ⑬ Lever (Right)
- ⑭ Master cylinder
- ⑮ Cable holder
- ⑯ Clamp
- ⑰ Brake caliper



CABLE ROUTING



- | | | |
|-------------------------------------|---------------------------|---------------------------|
| ① Rear shock absorber sub-tank hose | ⑩ Radiator | ⑲ Cable holder (boss) |
| ② Y.E.I.S. hose | ⑪ Radiator hose 2 | ⑳ Band |
| ③ Y.E.I.S. chamber | ⑫ Band | ㉑ Clutch cable |
| ④ Tension pipe | ⑬ Band | ㉒ CDI magneto lead |
| ⑤ High-tension cord | ⑭ Ignition coil | ㉓ Clamp |
| ⑥ Radiator hose 1 | ⑮ CDI unit lead | ⑳ Head pipe |
| ⑦ Radiator breather hose | ⑯ CDI unit | ㉕ Engine stop button lead |
| ⑧ CDI magneto lead | ⑰ Push lever | |
| ⑨ Throttle cable | ⑱ Crankcase breather pipe | |

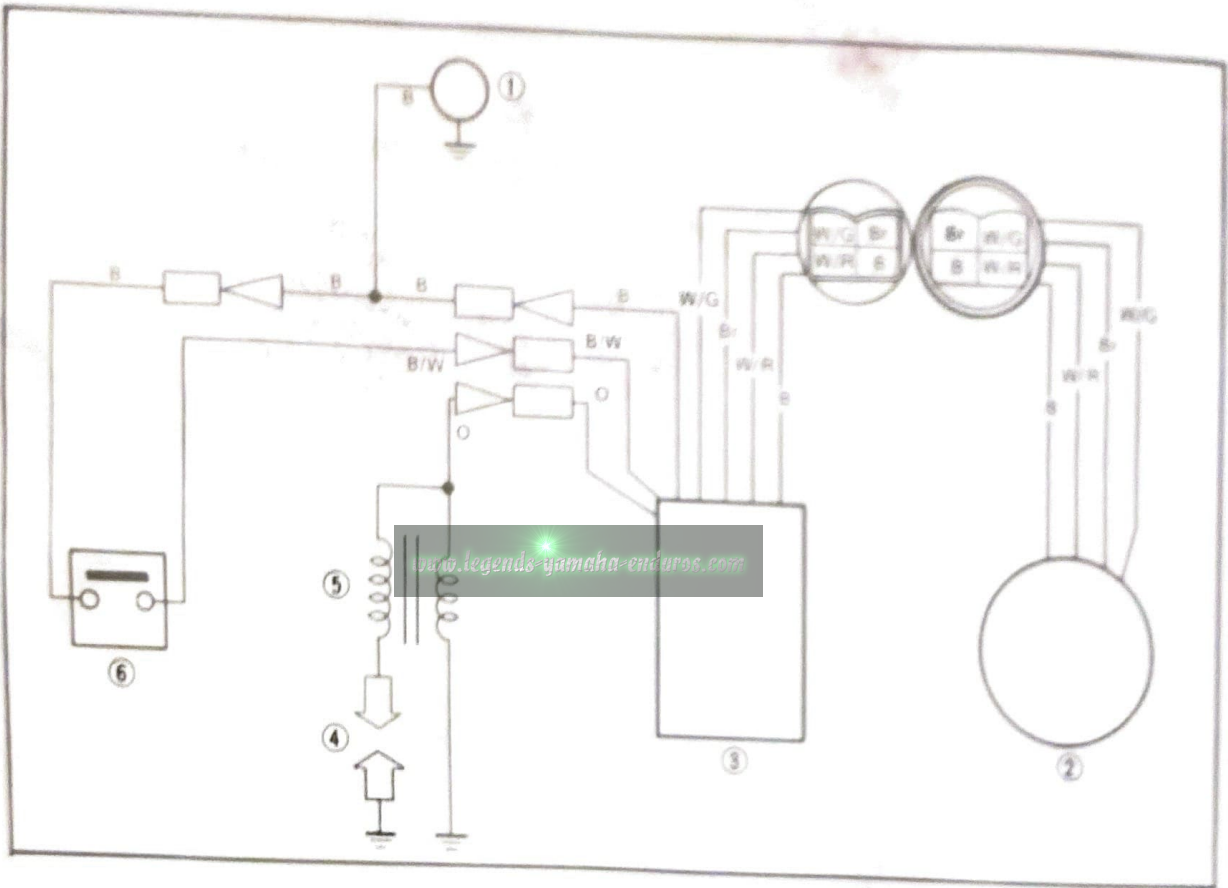


YZ80T WIRING DIAGRAM

- ① Ground
- ② CDI magneto
- ③ CDI unit
- ④ Spark plug
- ⑤ Ignition coil
- ⑥ Engine stop button

COLOR CODE

B	.....	Black
O	.....	Orange
Br	.....	Brown
B/W	.....	Black/White
W/R	.....	White/Red
W/G	.....	White/Green



www.legends-yamaha-enduros.com

www.legends-yamaha-enduros.com



YAMAHA MOTOR CO.,LTD.

IWATA, JAPAN

PRINTED IN JAPAN
86・8・3.7x1 CR
(英)